

Architectural Record

September 1922

the ARCHITECTURAL RECORD



Published in New York
September 1922

Chelmsford
Gray Granite



National Shawmut Bank
Devonshire St. Addition
Boston, Mass.

Parker, Thomas & Rice, Architects

CHELMSFORD GRAY GRANITE was used for the entire exterior facing of the Devonshire Street addition to this famous bank, from grade to top of cornice.

In a contract of this character, quality of material and promptness of delivery are equally essential. The H. E. Fletcher Company have fulfilled these requirements with complete satisfaction, adding another bank to their list of executed contracts.

You will find it worth while to become better acquainted with Chelmsford Gray Granite.

*Sample of Chelmsford Gray Granite will be
sent to any practicing architect upon request*

J. B. REINHALTER, SPECIAL REPRESENTATIVE, 456 MONADNOCK BLOCK, CHICAGO, ILL.

H. E. FLETCHER COMPANY
WEST CHELMSFORD, MASS.

The ARCHITECTURAL RECORD

Vol. LII
No. 3

CONTENTS SEPTEMBER, 1922

Serial
No. 288

Page
171

"TOWARDS A NEW THEATRE."	By Claude Bragdon, F. A. I. A.	171
Being a Description—with Commentary—of a New Type of Theatre Building, designed by Norman-Bel Geddes		
THE PHI DELTA THETA FRATERNITY HOUSE, Cor- nell University, Ithaca, N. Y.: William McLeish Dunbar, Architect	By Albert C. Phelps.	183
THE KENSINGTON SCHOOL, Great Neck, L. I.: Wesley Sherwood Bessell, Architect	By Harold Donaldson Eberlein.	198
PORTFOLIO OF CURRENT ARCHITECTURE		211
THE OLD HOUSES OF MICHIGAN	By Fiske Kimball.	227
THE ARCHITECT AS A FACTOR IN THE CONSTRUC- TION BUSINESS	By Thomas S. Holden, Statistician, The F. W. Dodge Company.	241
NOTES AND COMMENTS		245
COVER—Water Color by Otto Eggers		

Editor: MICHAEL A. MIKKELSEN *Business Manager:* J. A. OAKLEY
Contributing Editors:
GEORGE BURNAP HERBERT CROLY RUSSELL F. WHITEHEAD

PUBLISHED MONTHLY BY
THE ARCHITECTURAL RECORD COMPANY

115-119 WEST FORTIETH STREET, NEW YORK

T. S. MORGAN, Pres.
E. S. DODGE, Vice-Pres.

M. A. MIKKELSEN, Vice-Pres.
J. W. FRANK, Sec'y-Treas.

Yearly Subscription: United States, \$3.00; Foreign, \$4.00; Single Copies,
35 cents. Copyright, 1922, by The Architectural Record Co. All rights
reserved. Member Audit Bureau of Circulation.



A scene from the first act of Mr. Geddes' "Erminie" production, transported without change to his new type of theatre. Every spectator sees everything on the stage at all times. The entire scene yields a sense of luminous space and distance impossible in the existing type of stage. The point of sight in this drawing is from the seat farthest from the stage.

"TOWARDS A NEW THEATRE"

BY
CLAUDE BRAGDON, (F.A.I.A.)



Being a Description — With Commentary — of a New Type of Theatre Building designed by Norman-Bel Geddes

AMERICA has contributed little to modern dramatic literature—the best plays of recent years have been importations. There are, however, certain individuals working in our theatre—or more often outside it, beating at its doors in vain—who are concerned with what has come to be called the *art of the theatre*, and such of their stagecraft as they have succeeded in presenting has won for them an acclaim frequently denied to the actor and the dramatist. They have brought about this strange inversion of values without in the least intending to do so, simply by the force of their sense of beauty—their superior consciousness.

These artists, in spite of an unlooked-for initial success, so far from being content or complacent, are in revolt not only against existing conditions, but against the physical limitations of the theatre itself. What they are coming to desire and discern is a new and different theatre; and this not so much for the use that they themselves might make of it as for the sake of the audience, the actor and the dramatist.

For the audience they seek a closer communion, one with another; a fuller participation; increased facilities for seeing, hearing and enjoying; a sublimation of the emotions and the imagination through new modes of sensuous appeal.

For the actor they seek release from the limits of his proscenium picture frame, where he appears remote, flat, an image moving in a pool of light—like a fish in an aquarium. They would restore him to the world of solids, of three-dimensionality, by enabling him to be seen "in the round"; they would accord him

greater freedom of position and movement: up and down, back and forth, as well as to right and to left.

But the greatest liberation they would accord to the dramatist. The playwright brought up in the school of the theatre is accustomed to limit himself to one or two scenes to an act, or to a single scene throughout an entire play. He takes these restrictions so much for granted that (unless reminded by Shakespere and the Elizabethans) he thinks of them as inherent in the dramatic form, instead of as imposed by the form of the modern theatres. Unconsciously also he confines himself to what he knows can be represented by means and methods with which he is familiar—he clips the wings of his imagination to keep it in the barnyard, as it were. In brief, the modern dramatist, without himself realizing it, has come to think of the drama in terms of stage representation, with the result that his creative imagination is not stimulated into activity by the flux of life. Inevitably writers of more untamed imagination and dearer lovers of life have sought an outlet through the more flexible form of the novel, the tale.

Now the release of audience, actor, or dramatist from the restrictions imposed by the existing type of proscenium or "peep-show" theatre, is not, of course, going to re-create the drama. That renaissance depends on the movement of consciousness and upon that alone. As long as the theatre—that temple of the human spirit—continues to be regarded as "a real estate proposition" and is exploited as such, no flower of the spirit will bloom or flourish there. No fact is better established than that the money-getting

consciousness is aesthetically sterile.

But evidences are not lacking of a transformation of consciousness, of the pressure, both without and within the theatre, of a fresher and more abundant life. Because the artists to whom I have referred feel in themselves this pressure, because they believe in "a fount about to stream," they want to fashion a more perfect vessel for the poured out creative energy when that fount shall be unsealed.

It is not their idea to abandon the present form of theatre altogether or all at once. The proscenium-frame theatre is (naturally) perfectly adapted to that dramatic form which has been adapted to it, but it is ill-suited to the presentation of Greek or Elizabethan drama, and to such plays as would give free range to the imagination of an author accustomed to the liberty afforded by the novel or even of the cinema. Least of all would the picture-frame theatre prove adequate for a new type of dramatic representation altogether—one which is shaping itself in the minds of those dedicated to the discovery of new possibilities of emotional expression in song, in mobile color, in pantomime and in the dance. Some synthesis of all these elements—some inspired binding of them all together—might lead to a new art form: the art of the theatre par excellence.

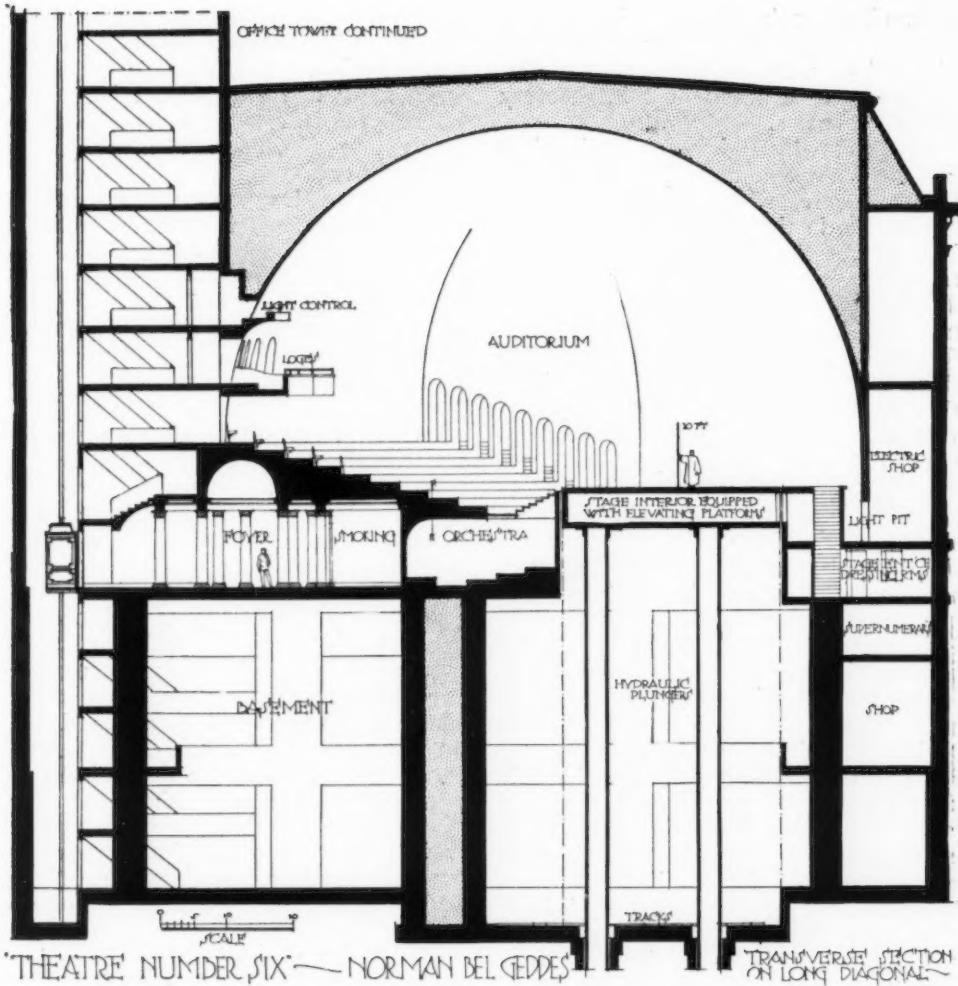
To gain some idea of the grounds for the deep dissatisfaction with the existing (physical) theatre cherished by those who know it best, glance at it for a moment with their eyes. It is convenient, comfortable, even luxurious as to its auditorium—the box-office side; but on the 'seamy side of the asbestos curtain there has been no substantial improvement, but rather retrogression from the theatres of an earlier day by reason of the saving of space made necessary by high building costs and increased ground rents. The stage has been made shallower; the floor trap, the painting bridge, the green-room have been eliminated; the dressing rooms have been crowded aloft, and, superimposed, are reached only by endless flights of narrow, noisy iron stairs. The many ingenious mechanical devices and felicities of operation and arrangement which

have revolutionized European stagecraft (in its finer manifestations) and even influenced its drama are completely unknown in the modern American theatre, wherein the comfort of the playgoer has been increasingly considered, but the convenience of all back-stage functionaries, including the actor's, has been considered less and less. To sum it all up in a phrase, there has been no intention of consciousness upon the fundamental physical problems of the theatre from any other point of view than that of monetary gain.

Such being the situation, any new solution of the problem of the theatre building should be of interest, and the solution here presented has a unique importance, because it is the contribution of Mr. Norman-Bel Geddes, a man deeply immersed in the existing theatre, but at the same time deeply desirous of that other theatre which exists as yet only in the ardent dreams of those who feel the pressure of a beauty which is new.

Mr. Geddes' plans are presented without change, just as they came from his hand. Because he is neither an architect nor an engineer they must needs be dealt with from the standpoint both of design and structure before they achieve their final synthesis. Such matters as heating, plumbing, ventilation, remain unconsidered; the question of safety has been kept constantly in mind, but not as safeguarded by building ordinances framed for an entirely different type of theatre. These plans, which are developed considerably beyond the "preliminary sketch" stage, were presented by their author at a meeting of the Architectural League of New York; and when it broke up, after an animated discussion which lasted till after one o'clock in the morning, the consensus of opinion appeared to be that Mr. Geddes' plans were practicable, structurally not at all unsound, and aesthetically full of promise.

The theatre is essentially an urban institution; it flourishes best where the tide of life flows strongest and consequently where land values, rents and taxes are highest. Any theatre scheme must therefore take into consideration the economic



aspect of the problem first of all. This holds true whether the building be privately owned and operated, or whether it be endowed. And because the revenue of a theatre is derived from the sale of its seats, that plan will be best (other things being equal), because most economical, which provides the greatest number of desirable seats on the smallest plot of ground.

Because he does not seek to avoid, but rather to challenge comparison with theatres of the existing type in this matter of profitable utilization of space, Mr. Geddes assumes, for the working out of one hundred seventy-three

his scheme, a plot of ground one hundred by one hundred feet, with streets on two adjoining sides. This approximates conditions current in New York for buildings of this class. He finds that by his scheme, placing the stage in an angle instead of against one side of the square, he is able to seat more people than does the old-fashioned theatre of equal size. At the same time he gets a deeper stage, dispenses with balconies and galleries altogether, and gives to each person nearly double the amount of floor space ordinarily allotted. All this is made possible because the main axis of stage and audi-

torium is along the diagonal of the square represented by the ground plan, and the diagonal of a square is the longest line which can be drawn within it, as every schoolboy knows.

That with which this type of auditorium has the closest affinity is perhaps the Greek theatre, with its seats arranged circle-wise, in tiers. But in this modern instance the tiers are not intersected by any transverse aisles whatever; the actor faces an unbroken sea of faces. The entrances being from either side instead of from the back, each tier becomes an aisle for all those entering or leaving it, a thing made possible by the wide interval—four and one-half feet—between one chair-back and the next. By this arrangement every seat has plenty of "leg-room" and also commands an excellent view of the entire stage, none being too distant to be desirable, nor too high up or low down. There is no gallery and there are no boxes—only a single row of loges immediately above and behind the outermost tier of chairs.*

Because this constitutes so radical a departure from the existing type of auditorium, it fails to conform to current building laws relating to theatres, but this does not mean that it would be less safe under panic and fire conditions; there is every reason to believe it would be more so. Instead of being an aisleless theatre, as from the floor plan it appears, it is all aisles, and these discharge into passageways two feet wider than the New York building law requires. The direction of the discharge is gently downward; the absence of a balcony, with its long flights of stairs, eliminates the greatest source of danger in case of panic, while the absence of flies, gridiron and an accumulation of scenery on and above the stage reduces the danger of fire.

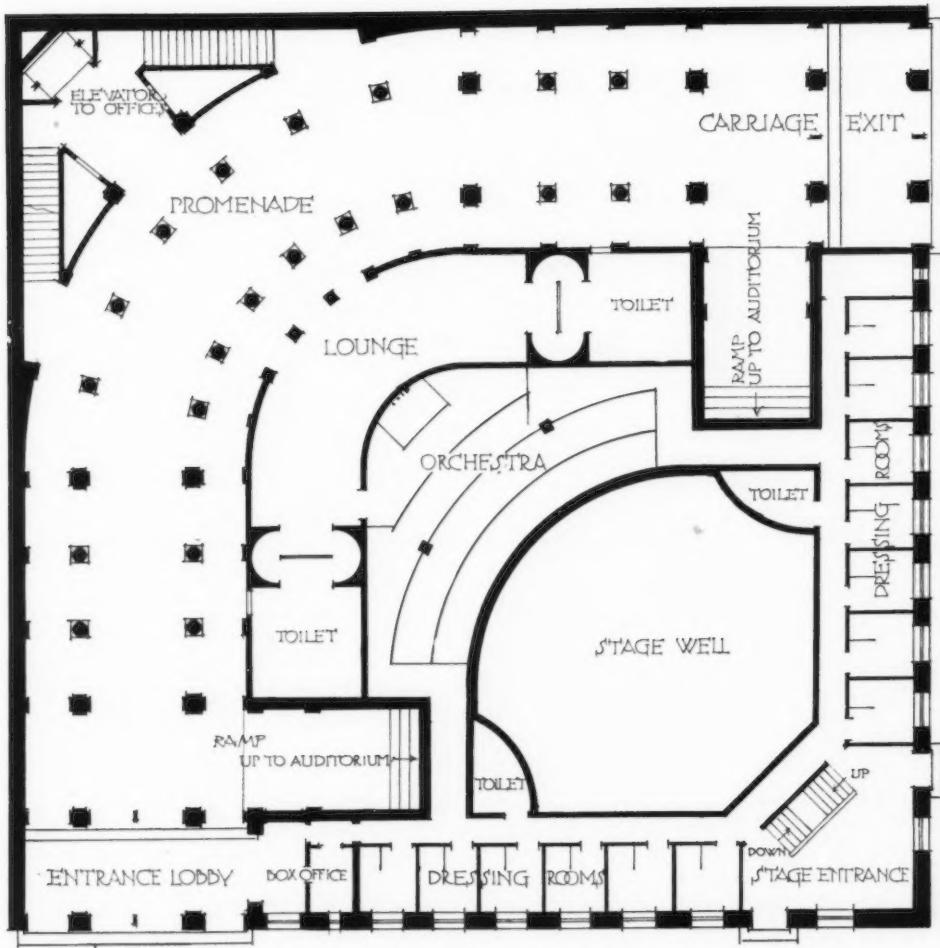
For in the stage and everything pertaining to it Mr. Geddes departs from precedent altogether. The stage is undivided from the auditorium except for a flight of

* Certain of the newer European theatres, notably some of those designed by architect Max Littman, resemble Mr. Geddes' in having a single bank of seats with a relatively steep slope, and longitudinal instead of transverse aisles, but the seats have a different relation to the stage, being in front of it (as is customary) instead of "around it".

steps across its entire front, and two side jambs which lose themselves in the curve of the ceiling. The same great dome spans actor and spectator; there is no visible orchestra pit, no footlights, no proscenium arch, nor even a curtain between the two.

To a stage-hand, strange to such a stage, looking aloft for "a line in one," it would be as though his entire firmament were blotted out—swept clear of every appurtenance of his trade. Instead of the usual wilderness of ropes, cloths, battens, borders, his eyes would encounter nothing but the vast sweep of that cyclorama which constitutes both walls and roof. This, capable of being made luminous in any part, in any color, to any pitch of intensity, would yield every imaginable sky effect. All else in the way of scenery is set on movable platforms deep underneath the stage—platforms which are capable of being shifted horizontally, and of being raised and lowered by hydraulic power; in their final position at the proper level they constitute the stage floor. There are two of these platforms, so that while one scene is being played the next is being set, the substitution being effected during a few moments of darkness, or behind a "curtain of light." In this way scene could be made to succeed scene with no descending guillotine of a curtain to cut off the actors' heads, and by a diversion of attention, break the spell.

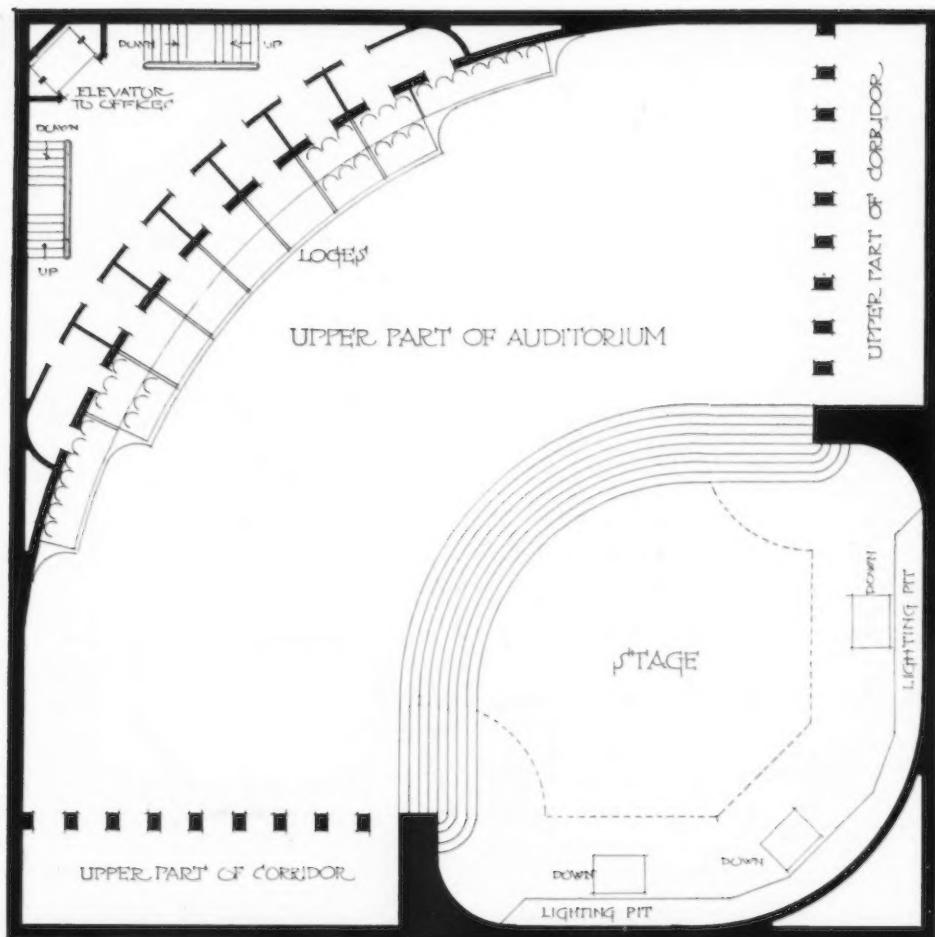
The major part of the space underneath the auditorium is occupied by a broad quadrant-shaped foyer, extending from one entrance to the other—an ample promenade, which by reason of its great curved colonnade could not but be architecturally impressive. The remaining room between the foyer and the stage on this level is occupied by the orchestra, which is entirely concealed from the view of the audience, the sound reaching the auditorium through perforations in the risers of the continuous flight of steps which forms the apron of the stage. This room is large enough to accommodate an orchestra of sixty musicians; the conductor commands a view of the stage through a large periscope.



"THEATRE NUMBER SIX" — NORMAN-BEL GEDDES

SCALE

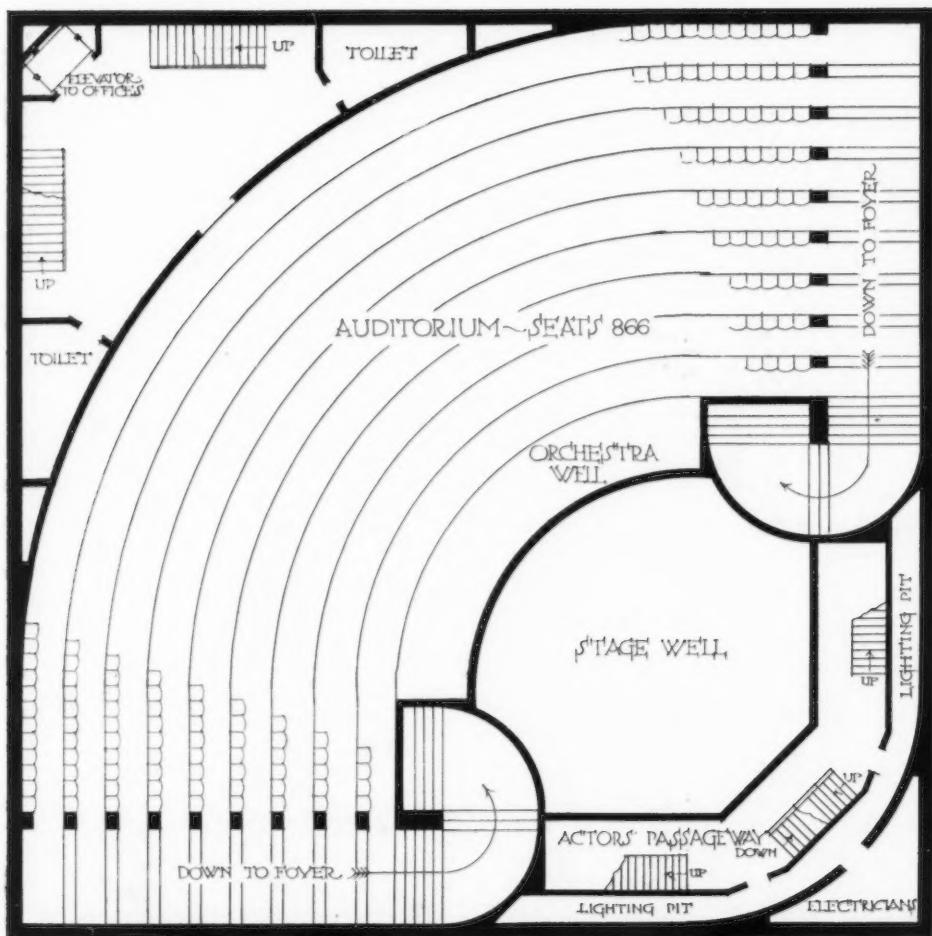
THIS DRAWING REPRESENTS A PLAN, OR HORIZONTAL SECTION TAKEN JUST ABOVE THE STREET LEVEL. A CURVED FOYER, 150 FEET LONG BY 25 FEET WIDE EXTENDS FROM STREET TO STREET. FROM HERE, BROAD EASY STAIRWAYS ASCEND TO THE AUDITORIUM ABOVE. THE ORCHESTRA PIT, ACCOMMODATING 60 MUSICIANS IS INVISIBLE TO THE AUDIENCE, BEING ON THIS LOWER LEVEL. EACH OF THE 14 INDIVIDUAL DRESSING ROOMS IS EQUIPPED WITH A SHOWER AND HAS A WINDOW TO THE OUTSIDE AIR.



"THEATRE NUMBER SIX" ~ NORMAN-BEL GEDDE'S

SCALE

THIS DRAWING REPRESENTS A PLAN OR HORIZONTAL SECTION TAKEN THROUGH THE LOGES' AND ABOVE THE STAGE FLOOR. THAT PORTION OF THE STAGE INDICATED BY DOTTED LINES ASCENDS FROM THE BASEMENT WHERE ALL THE SCENES ARE SET. THERE ARE TWO OF THESE ELEVATING PLATFORMS, AND THEY CAN BE USED ALTERNATELY, SO THAT ONE SCENE MAY BE SET WHILE ANOTHER IS BEING "PLAYED." THAT PART OF THE DOMED CEILING BEHIND AND ABOVE THE STAGE, LIGHTED FROM THE PIT, SERVES AS A CYCLORAMA FOR SKY EFFECTS.



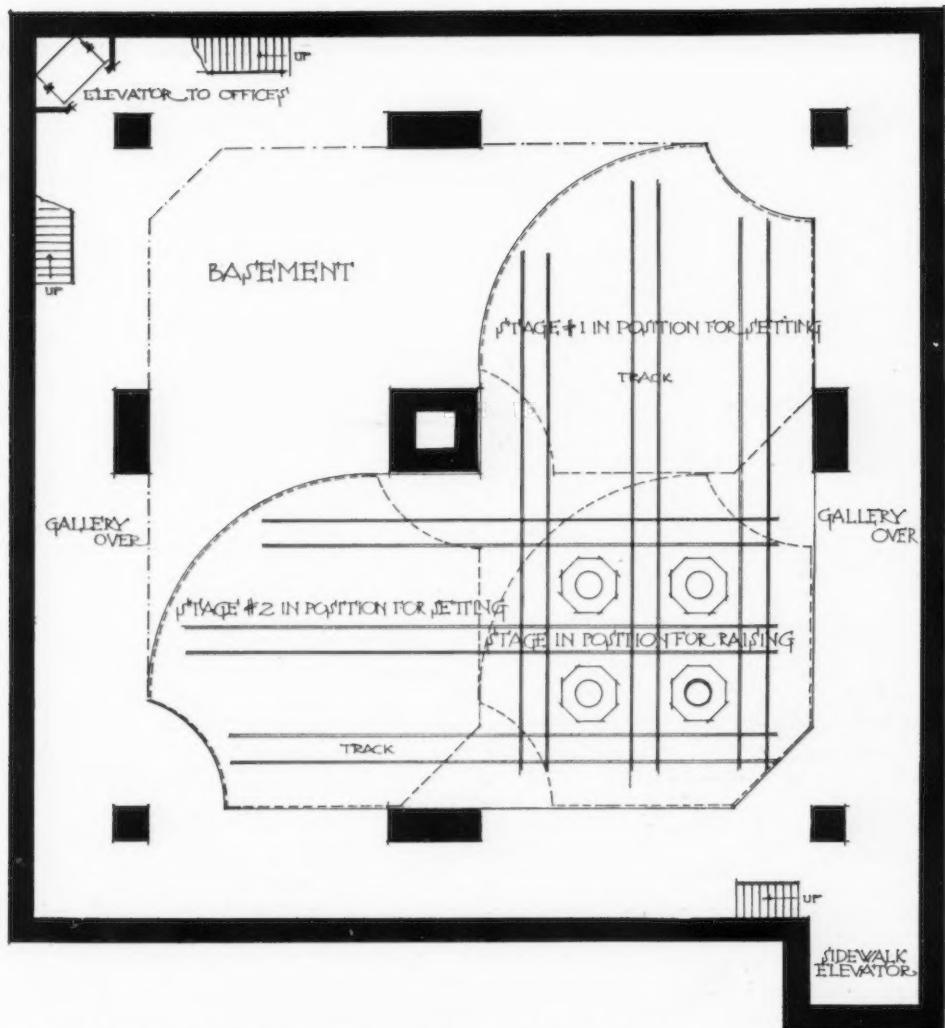
"THEATRE NUMBER SIX" — NORMAN-BEL GEDDES

SCALE 10'

THIS DRAWING REPRESENTS A PLAN OR HORIZONTAL SECTION TAKEN JUST BELOW THE STAGE FLOOR. IT SHOWS THE AUDITORIUM SEATING, AND THE APPROACH FROM THE FOYER BELOW. THE CHAMBER IMMEDIATELY BEHIND THE STAGE WELL IS A WAITING-PLACE FOR PERFORMERS. THREE STAIRWAYS CONNECT THIS WITH THE STAGE, AND ONE WITH THE DRESSING ROOMS BELOW. BACK OF THIS CHAMBER, ADJACENT TO THE WALL, OR CYCLOPSMA, IS A "LIGHT PIT" WHERE CONCEALED LAMPS ILLUMINATE AS MUCH OR AS LITTLE OF THE DOME AS IS DESIRED.



A view of the basement, showing the stage platform midway between the basement floor, where the scenes are set, and the auditorium level, where they are enacted. Two of these platforms are used alternately, one being all ready to raise as the other descends. The entire basement area is available for the shifting and storage of scenery, instead of the constricted wing space as in the existing type of theatre.



"THEATRE NUMBER SIX"—NORMAN-BEL GEDDES



THIS DRAWING REPRESENTS A PLAN OR HORIZONTAL SECTION TAKEN JUST ABOVE THE BASEMENT FLOOR. ABOVE THERE ARE SHOPS IN THE FORM OF A BROAD AND LOFTY GALLERY AND ADDITIONAL DRESSING ROOMS FOR SUPERNUMERARIES.

FOUR PLUNGERS ELEVATE THE STAGE (ALL SET) TO ITS PROPER POSITION. THESE STAGE PLATFORMS ARE TWO IN NUMBER AND ARE USED ALTERNATELY BEING ROLLED OFF TO ONE SIDE WHILE THEY ARE SET. ALL THIS IS IN A PIT JUST DEEP ENOUGH TO BRING THE STAGE FLOOR LEVEL WITH THE BASEMENT FLOOR.

The dressing rooms are also on this level; they occupy the space underneath the outside edges of the stage, which being adjacent to the streets gives each dressing room outside light and air.

Immediately behind and below the rear of the stage is a passageway or ante-room for actors connected with the stage proper by means of three stairways, the wells of which are capable of being closed by electrically controlled traps. Behind this ante-room—between it and the main wall—is a "light pit" wherein are concealed lamps and projectors which reflect light upward upon the dome, for sky effects.

Below the individual dressing rooms on the foyer level are others for the use of supernumeraries and chorus. The basement is one vast and lofty chamber with a broad gallery midway in its height, on all four sides. This is for use as a shop.

All scene changes are made in the basement, as has been said. Consequently it is here, where there is plenty of room, that all scenery and properties are stored. The stage, when lowered, descends into a shallow pit which brings its floor level with the basement floor. There it is substituted for its fellow, all set ready for raising. The manner in which this substitution is effected will be best understood by referring to the basement plan. The platforms are carried from their original position, at right angles to one another, a distance equal to their diameter, on tracks set in the floor of the pit. All this shifting and raising is under electrical control and is accomplished noiselessly and quickly (the entire transfer would occupy only twelve seconds) for the mechanical problems involved though unusual are neither difficult nor new.

To the eye and mind accustomed to the candy-box style of theatre design and decoration—a style inherited from a time when theatre-going was an amusement of the court rather than the absorption of the populace—the stark bareness and austerity of Mr. Geddes' interior may come as something of a shock. But a moment's reflection should convince the unprejudiced that Broadway is wrong and that he is right.

The theatre—this theatre at least—is a

place for the stimulation and sublimation of the mind and emotions through the senses—preeminently through the sense of sight. This is effected by means of dramatic representations which might range through many countries, many styles, many periods—even through the Fourth Dimension and the Eternal Now. Each must be provided with its appropriate *mise-en-scène*—the combination of forms, objects, colors, which express it best. Now the theatre auditorium is as it were the background to this *mise-en-scène* just as it in turn is the background to the action. Being a background for so many and so various things, it should be bare; no more littered with detail and ornament than the ear should be filled with sounds alien to the music it would hear, or the eye with images other than the ones toward which it looks.

But because this theatre is bare it does not mean that it is therefore lacking in beauty. Indeed its very bareness—the unbroken sweep of its dome—gives an unequalled opportunity for beauty of a new and thrilling sort. The beauty of changing colored light—color-music if one chose to name it so—that Art of the future of which Wilfred's Clavilux gave us the first faint actual intimation, showing what colored light might become when disassociated from all those ideas of corsets, chewing-gum, automobile tires, et cetera, with which the zeal of the advertiser has succeeded in linking it up.

And this brings me finally to the subject of lighting. Mr. Geddes' lighting arrangements differ in important respects from those in current use; for though the development of lighting has proceeded more rapidly in the theatre than anywhere else, the equipment upon which this development in part depends has not kept pace with the advance.

In the dear old days when it was only necessary, at the beginning of every act of a play, to "throw on yer borders" and "throw on yer foots," after which the electrician was free to retire underneath the stage and play pinochle with the rest of the crew, it was all very well to have the electrical switchboard—looking like the engine room of an ocean liner—where



Effective representation is possible on this stage completely stripped of scenery. Both views of the stage are taken from the extreme side of the auditorium. There can be no bad seats in this theatre.

it commanded only a near and narrow view of the stage. But now that light is coming to be recognized as an emotional language, like music, with power to induce and maintain moods of the soul—this will not do. Light must be made to pale or brighten, it must slowly transform itself from warm to cold, and from cold to warm, changing key and tempo as it were, in sympathy with what is passing on the stage. To achieve these effects successfully—and many others, more intricate by far—it is imperative that the light operator should work from a compact keyboard, and in full view of the auditorium and stage.

These are the reasons why, in this theatre, the light control is located in a little booth above the loges, behind and above the heads of the spectators and concealed from them, the projectors being on disappearing carriages, hidden by a parapet save when in actual use. Here the light operator sits, remote, unseen, like the organist in the choir-loft of a cathedral, learning to master an art which may usher the human spirit into realms at which music itself now beats in vain.

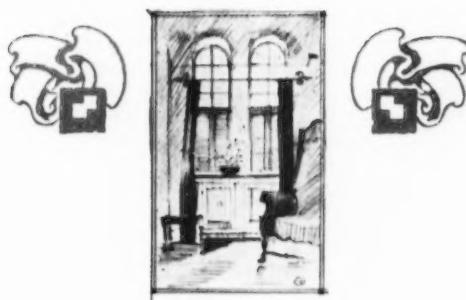
It should be stated that a theatre of this type—with scene and actors thrust forward into the auditorium instead of being kept behind a proscenium picture frame—is practicable and desirable largely by reason of the advancement in the use and control of artificial light. Nothing so distinguishes the most modern stagecraft from that of only a few years back as the new uses to which light is put and the extraordinary functions it is made to perform. Scene changes can be made in utter darkness with the curtain up, or behind a "curtain of light", objects can be made to reveal themselves, conceal themselves, transform themselves by the combined use of light and pigment, scientifically worked out. "Painting with light" is not simply a catchword, but a phrase with an ever-expanding content. By the use of lenses light can be so concentrated and controlled that "mask-

ing" of the old-fashioned sort—concealing by means of curtains, flats, borders—is no longer necessary; darkness can be made to obliterate and light to reveal whatever is desired.

In the theatre we do not want to feel that we are *at* a play, but that we are *in* it—"The work of dramatic art is lived." Only great drama greatly acted can fully arouse in consciousness this inner life, but conditions could be made far more favorable to its induction than they are now. In Mr. Geddes' theatre, on his stage, set and lighted as he or another might set and light it, scene and actors might be made to seem a part of life or of inner fantasy, perceived as though at the other end of the optic nerve than that which leads outward toward the world of every-day.

Furthermore, such an arrangement of stage and auditorium would promote that feeling of *rapport*, participation, and conduce to the generation of that indescribable common emotion which is perhaps a cosmic emotion under stress of which a dramatic representation becomes dynamic, poignant, rhythmic, exactly in proportion as the spectators become responsive, impressionable, enthusiastic, sensitive to every emotional overtone.

Those great primal orgiastic tides of thought and feeling, the arousing of which was perhaps the very *raison d'être* of the Greek theatre, are practically unknown in modern life—our nearest approach to them being the revival meeting, the prize fight, or the ball game. In them there dwells nevertheless some divine, dynamic quality, perilously poised between creation and destruction, diabolism and ecstasy. Of these great forces we are either ignorant or afraid. But they are destined to re-enter life either in the shape of mob-violence—as a result of repression—or through inspiration to creative effort, if they find a prepared and natural channel such as the theatre—cleaned of its accumulated ignorances and abuses—almost alone affords.



THE
PHI DELTA THETA FRATERNITY HOUSE
CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM MCLEISH DUNBAR, ARCHITECT

By
Albert C. Phelps

THE problem of the college fraternity house is becoming of constantly increasing importance to practising architects in nearly all parts of the country. Local conditions differ considerably, but the general uses and requirements are so nearly the same at most educational centers that pretty definite types have been evolved.

In some places, as at Yale, the fraternity lodge is isolated, and so treated as to suggest mystery and well-guarded rites, and no living quarters are provided. In most cases, however, the provision of dwellings for the students, and especially facilities for entertainment, quite equals and often surpasses in importance the chapter-room, which is frequently given no external expression whatever.

At Cornell University, with its eighty-two fraternities and associations, the building of fraternity and club-houses has long been a question to occupy the attention of University authorities as well as of students and alumni. A recent bequest by a distinguished alumnus to provide "such thing or things as may conduce to make Cornell a more human place," which is about to take the form of a university union, has been thought by certain individuals to reflect upon the

social system as affected by fraternity domination. This, however, has been most vehemently denied, and it has been pointed out that the donor was a devoted member of a well-established fraternity whose loyalty and constant helpfulness to the university are beyond question. Whatever may be the individual opinion as to the desirability of the degree of fraternity strength attained at Cornell, the practical problem of adequately housing the student body has been largely assumed and if not solved in its entirety by the fraternities, at least so minimized as to make the tardy development of university dormitories possible.

The beautiful surroundings and the availability of sites of considerable area, as well as other considerations, have encouraged the erection of fraternity houses of dignity and permanence and at times of real architectural merit. While the Cornell chapters of the various fraternities perhaps may be justly accused of competitive building, this has not led to extravagance; the houses as a rule represent a mode of living most rational, and in detail particularly they are quite simple as compared with student quarters at English universities and with many dormitories in this country.



PHI DELTA THETA FRATERNITY HOUSE, CORNELL UNIVERSITY,
ITHACA, N. Y.

William McLeish Dunbar, Architect

The tendency in recent years has been to transfer the fraternity center to the north of the campus rather than to build on the campus or in the region south and west, between the campus and the town, as in previous cases.

The Phi Delta Theta Fraternity, conforming to this custom, acquired a tract some ten minutes' walk north of the main University quadrangle. The way from the campus leads across a foot-bridge spanning Fall Creek, which flows through one of those tree-filled gorges so characteristic of the Finger Lakes Region. Whether the gorge is more attractive in winter when the stream is frozen and the cliff-like sides are hung with gigantic icicles, or in spring and summer when the holes between the rapids become popular swimming resorts and the icicles give place to flowering shrubs, is open to question. A short distance north of the gorge lie the trolley-line and motor road; beyond them rises a wooded spur of land of about three acres in area, the site of the house.

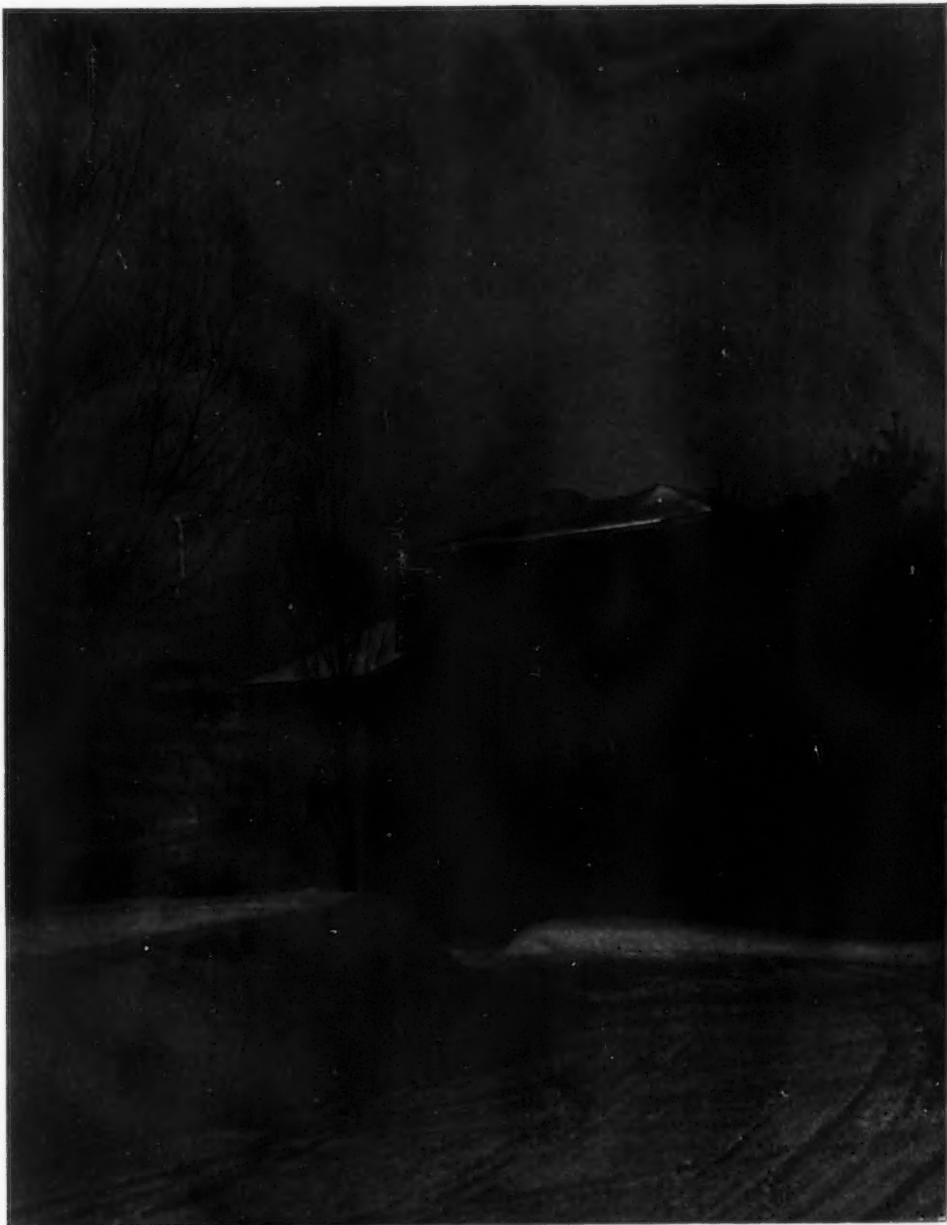
Originally partly wooded, the tract was developed as an arboretum by a professor of botany in the University. The later planting had been established about twenty years and has proven of inestimable value as a setting for the building.

The ground is very rugged, and streets—or more properly roads—extend on three sides; west, south and east. A low point is at the junction of Thurston Avenue and Ridgewood Road, at the southeast, and here the tennis court and entrance gate are to be placed. A gravel path winds through the woods, ascending a rise of seventy-five feet to the fore-court of the house. A drive at this level leads to a point higher up on Ridgewood Road near the entrance to another fraternity house beyond.

The Phi Delta Theta House has hollow tile walls covered externally with salmon-colored stucco of unusually effective texture; the roof-covering is tile of a general pinkish tone deepening into reds; the floors are of fireproof construction throughout.

Before the main entrance door there will be a terrace of flagstones and brick planted with evergreen shrubs that will greatly heighten the effect of the mellow stucco walls. Above the entrance arch are the arms of the fraternity carved in buff limestone.

The plan is, on the whole, logically and frankly expressed in the external massing, which lends itself readily to the style adopted—that of the Italian hill towns, with a decided Tuscan flavor. Here one



PHI DELTA THETA FRATERNITY HOUSE,
CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.

one hundred eighty-five



DETAIL OF SMALL TOWER.

feels that the present-day leaning toward Italian precedent is justified by both the setting and function of the building. Little that is pedantic or affected is noticeable externally or in the interiors, but much of genuine charm and logical expression in a style the essence of which is thoroughly understood.

The scheme adopted is that of the individual suite, rather than the "dormitory system" whereby the studies are grouped in one part of the house and the beds are placed in one or more large chambers, usually at the top of the house. "The design of the new Phi Delta Theta House," says the architect, "had for its first consideration a simple fundamental

idea of great importance—that each man be given a room where he can have absolute quiet to follow his own thoughts in study and reading."

The chapter normally comprises about forty-five active members; the freshmen and generally several others room elsewhere but take their meals at the chapter-house. Provision is made for the housing of twenty-eight men in suites, each of which comprises a study and a bedroom that accommodate two men. The suites are grouped in four units, each of which is provided with a bath. All these comparatively small rooms are placed on three floors in the eastern section of the house. The bedrooms are put at the angles of this part of the building and serve as buffers to the winds. Steam heat is taken to the studies only, the door between study and bedroom being tightly fitted and equipped with a threshold, as if on the exterior.

The finish of the bedroom and study walls is a rough antique plaster giving a warm sunny effect, due to the yellow sand in its composition. This finish is in keeping with the general character of the house and is economical in upkeep. The studies are kept free from the clutter and over-decoration too frequent in students' rooms, but are made attractive by the introduction of a limited number of framed pictures hung from the moulding, and especially by color in the form of small tapestries and Navajo rugs hung upon the walls. Figured or bright-colored curtains of uniform tone are used at the windows.

If any question arises concerning the successful solution of the problem in the

mind of the visitor to this delightful house, it is whether the private quarters have not been unduly limited to provide greater space and luxury in the rooms designed particularly for entertainment. This is due in part to the nature of the site. However, the studies and sleeping-rooms are convenient and comfortable in spite of a trace of that asceticism prevalent in the cells of the great mediaeval monasteries. Indeed no small part of the charm of the whole house is due to this feeling of adequate restraint coupled with an evident appreciation and intense love of the beautiful. If at times a slight trace of immaturity obtrudes itself, one soon forgets this in admiration of the evident spontaneity and total avoidance of the commonplace.

The architect explains—and the visitor will agree—that in the high entrance hall the note of the house has been struck. Somewhat dim, due to the light filtering through heavy glass, the room displays true Italian simplicity of effect. The ceiling beams are roughly adzed and show the cracks of time. The walls are of an ochre plaster with considerable variation of color, tinged slightly with black and rubbed smooth after the manner of Continental plaster work. The lighting fixtures are of wrought iron and a curving stair rail with handsome iron balusters and terminal scroll leads to an arched opening at the side. The black and white tessellated floor harmonizes with the general simplicity and yet adds a desirable richness to the room, which is further relieved by some rather sumptuous furniture—a great chair covered with scarlet velvet and a tooled screen in dark red and gold, surmounted by an old print. In a niche is a Chinese robe of scarlet satin heavily embroidered.

From the entrance hall one ascends by nearly a dozen steps through a low arch to the living room, the large room and in many respects the climax of the whole house. The room measures about thirty-five by fifty feet and is covered by an open timber roof, the trusses of which are some fourteen feet above the floor, which is of oak inlaid with a black wood. Over the entrance arch is a musicians'



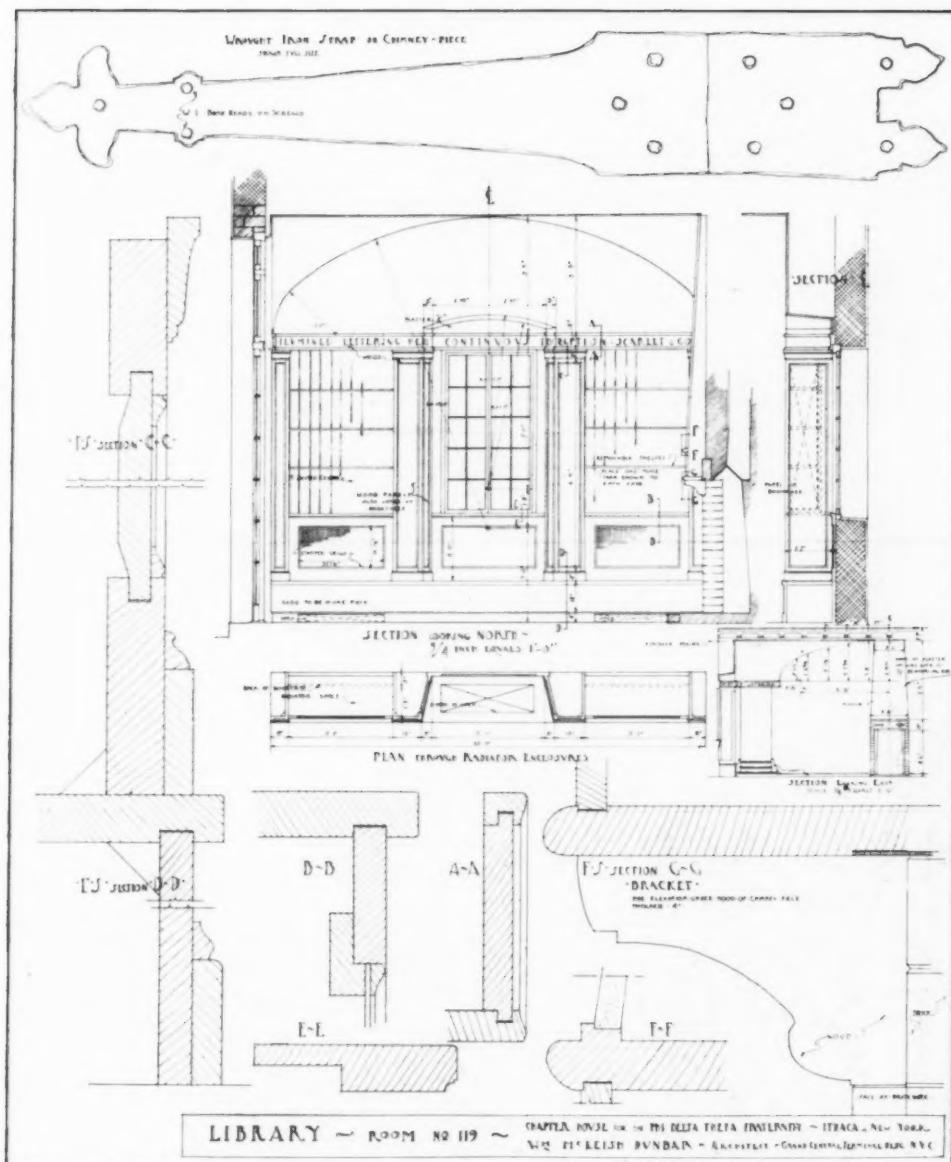
BALCONY OVERLOOKING VALLEY.

balcony and at the opposite end a gallery reached by a spiral stair-case in the angle. On the end wall, below the gallery, is the only wall decoration of the room—a handsome painted hanging having the essential qualities of a rich tapestry. Beneath the hanging is a fine old refectory table flanked by antique Spanish chairs. Midway on the north side of the room is the chimney-piece with its high stone mantel, and about its raised hearth are grouped some excellent pieces of furniture of Italian design. Brilliant color is

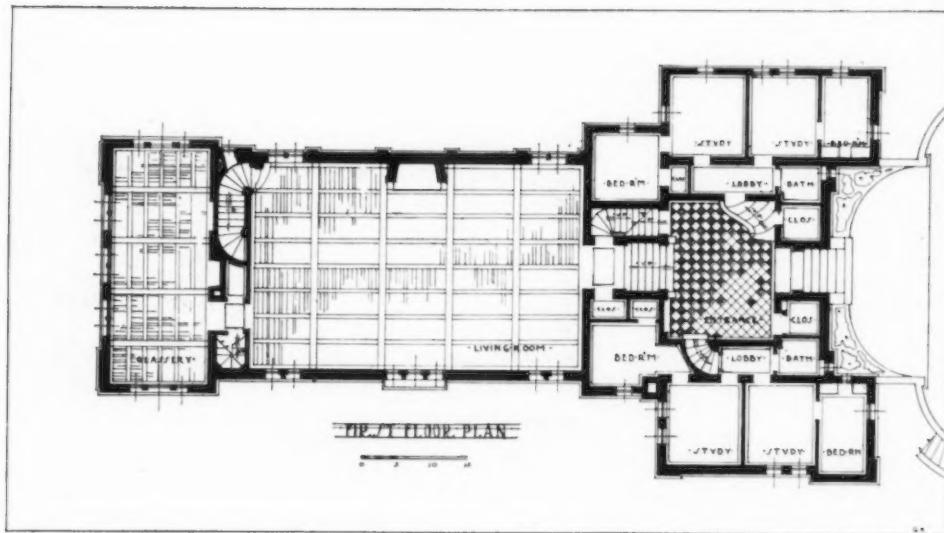


LIBRARY—PHI DELTA THETA FRATERNITY
HOUSE, CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.

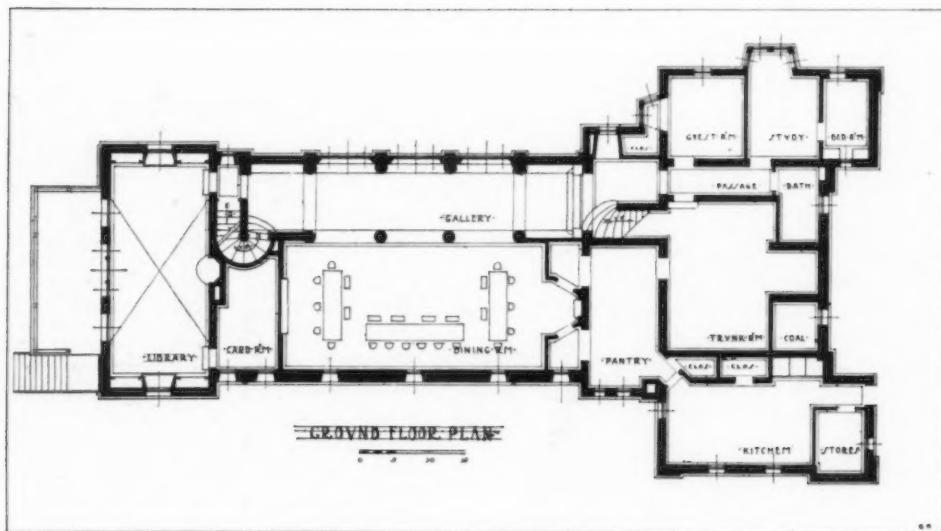
one hundred eighty-eight



SECTION AND DETAILS OF LIBRARY—
PHI DELTA THETA FRATERNITY HOUSE,
CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.



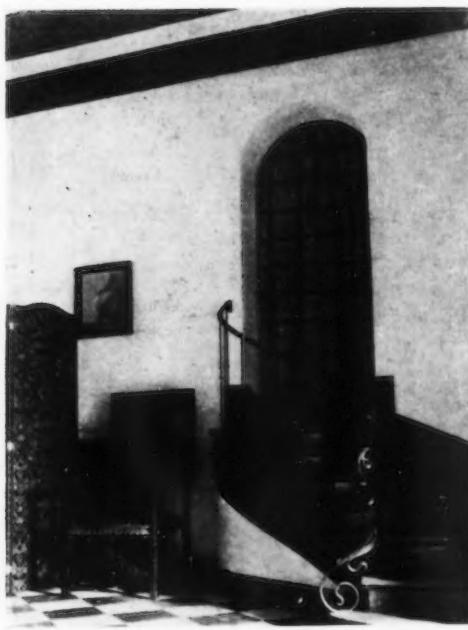
PHI DELTA THETA FRATERNITY HOUSE, CORNELL UNIVERSITY, ITHACA, N. Y.
William McLeish Dunbar, Architect.



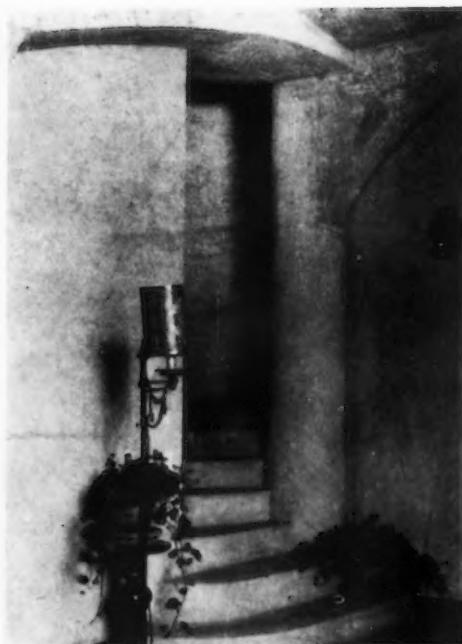
PHI DELTA THETA FRATERNITY HOUSE, CORNELL UNIVERSITY, ITHACA, N. Y.
William McLeish Dunbar, Architect.



LIVING ROOM—PHI DELTA THETA FRATERNITY,
HOUSE, CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.



STAIRS TO STUDY ROOMS.



SECONDARY STAIRS TO GALLERY.

introduced partly in the upholstery of the furniture, but more especially in the scarlet damask window curtains that fall quite to the floor. In contrast with the dim illumination of the entrance hall the effect of a flood of sunlight in the living room is particularly noticeable.

Beyond the living room is a "galleried" or sun-parlor with heavily beamed ceiling and a rugged stone fireplace. From this room one has an unsurpassed view of the broad valley with the town in the foreground and the house office looking down a beauti-



FIREPLACE IN THE LIVING ROOM

everchanging aspect of the distant hills fully planted swale to a vista of the

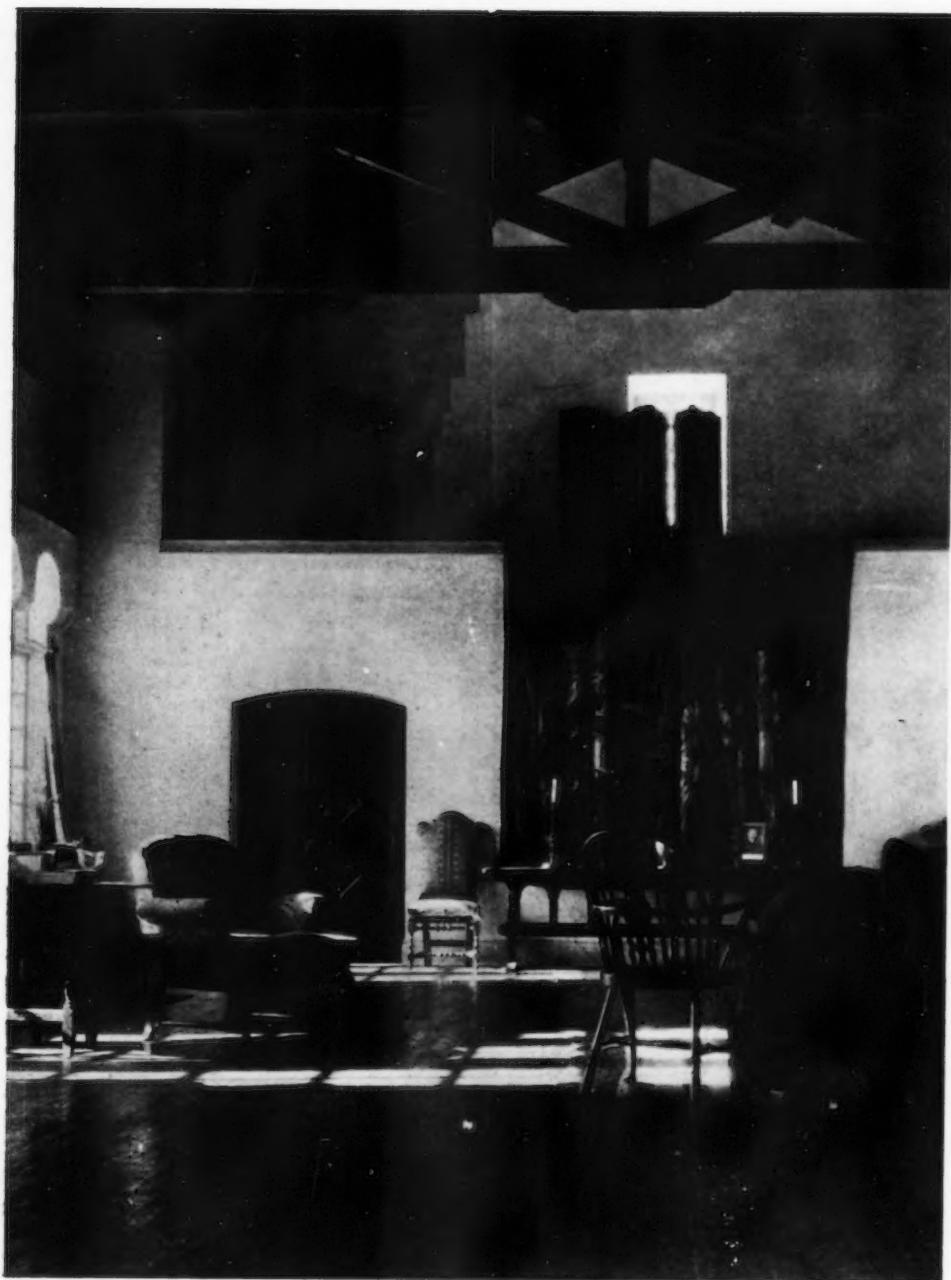
beyond, the lake sweeping away to the north, and directly to the west the pleasant farm lands, all of which combine to recall scenically the hill towns of Italy.

From either end of the living-room masonry stairs descend to a stone columned gallery lighted by small-paned heavily leaded windows of vari-colored glass. The floor is of dull red tile laid irregularly and interspersed with heavy flags. At one end are the alumnini rooms and the



ENTRANCE OF LIVING ROOM SHOWING MUSICIANS' BALCONY—
PHI DELTA THETA HOUSE, CORNELL UNIVERSITY, ITHACA,
N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.

one hundred ninety-three



LIVING ROOM, SHOWING GALLERY
AND DOOR LEADING INTO GLASSERY—
PHI DELTA THETA FRATERNITY HOUSE,
CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.



DINING ROOM—PHI DELTA THETA FRATERNITY
HOUSE, CORNELL UNIVERSITY, ITHACA, N. Y.
WILLIAM McLEISH DUNBAR, ARCHITECT.

one hundred ninety-five



GALLERY LEADING TO DINING ROOM—PHI DELTA THETA FRATERNITY HOUSE, CORNELL
UNIVERSITY, ITHACA, N. Y.
William McLeish Dunbar, Architect.

lake with its twin light-houses in the distance.

Off the side of the gallery is the dining room with its great circular stone piers and vaulted ceiling, recalling the treatment of the refectory in an Italian monastery. The U-shaped table and the specially designed furniture still further emphasize this resemblance, which is not a mere affectation but is founded upon the fundamental similarity of requirements of the religious and the student brotherhood. The effect of sunlight and shadow on the rough walls and vaulted ceiling is very attractive, and it is proposed to introduce color by means of a limited number of well-placed wall hangings that will harmonize with the upholstery of the chairs.

At the extreme west end of the house, sufficiently isolated for quiet, is the library. This room also has roughly plastered groined vaulting of considerable

height. The panelled woodwork, which is much in evidence, is painted a dull blue-green and heavily antiqued. With this color the muntins of the small-paned windows contrast, painted as they are the same ivory white that is used throughout the house. At the springing of the vault and continuing above the book-cases there is a narrow frieze of light blue edged with green and decorated with illuminated lettering in red and gold. A hooded fireplace occupies the center of the east side of the room, while in the opposite wall are French doors leading to an open porch and steps to the garden. It is planned to close this vista with a small white-columned summer-house, the site of which, directly on the axis of the main house, is flanked by a pair of great sentinel poplars.

The chapter-room is located in the foundations beneath the dining-room. Its external expression—when one under-

stands the arrangement—is the simple unbroken wall surface just above grade on the south side.

The kitchen, pantries, store-rooms, and servants' quarters are at the east end of the dining-room floor.

The house has been occupied less than a year and something still remains to be done in completing walks and approach and adding minor decorations and furnishings. However, in this brief time

there is evidence that the building will "wear well" both in material and sentiment, and as the passing years add the charm of maturity and age and the passing generations of students leave their marks of loyalty and affection, not only will Phi Delta Theta be proud of its home, but the University community will recognize that it is the richer for the addition of this fraternity house of real distinction.



LOOKING INTO THE DINING ROOM.



NORTH DOOR—KENSINGTON SCHOOL, GREAT NECK,
L. I. WESLEY SHERWOOD BESELL, ARCHITECT.

one hundred ninety-eight

↓ The KENSINGTON SCHOOL
~ GREAT NECK, LONG ISLAND ~
WESLEY SHERWOOD BESELL, ARCHITECT

By
Harold Donaldson Eberlein

THE Union Free School, Number 2, otherwise known as the Kensington School, at Great Neck, Long Island, claims something more than a passing notice—first, by reason of its intrinsic individual merit as a piece of modern school architecture; secondly, by reason of the tendency and the aims of which it is a convincing embodiment.

The architect, Wesley Sherwood Bessell, has followed an obvious, straightforward plan, but has incorporated with it certain features that the peculiar exigencies of the occasion called for. As may be seen, the accommodations for the kindergarten are so arranged that the small children in this department have their own separate entrance and need not come in contact with the rush of the older pupils in entering or leaving the building. This provision for the kindergarten serves the present needs, but ultimately, when a separate building is erected for the use of the youngest pupils, the quarters they now occupy will be converted to the purposes of the main school, a change that can be effected without making any alterations in the interior. The basement is well lighted and is equipped with ample locker rooms and play rooms for the boys and girls, sufficient to answer all requirements when the weather is too bad to use the outdoor playground. At one end of the basement are the domestic science kitchens, so arranged that they may easily be converted into a cafeteria whenever occasion arises. The general staircase is placed in the front of the building and at one side of the central corridor, where it is in full view of the principal's office.

In all there are twelve large classrooms, two of which at this time are devoted to the kindergarten department. In its general arrangement the school admits a degree of ready flexibility in the use of its *one hundred ninety-nine*

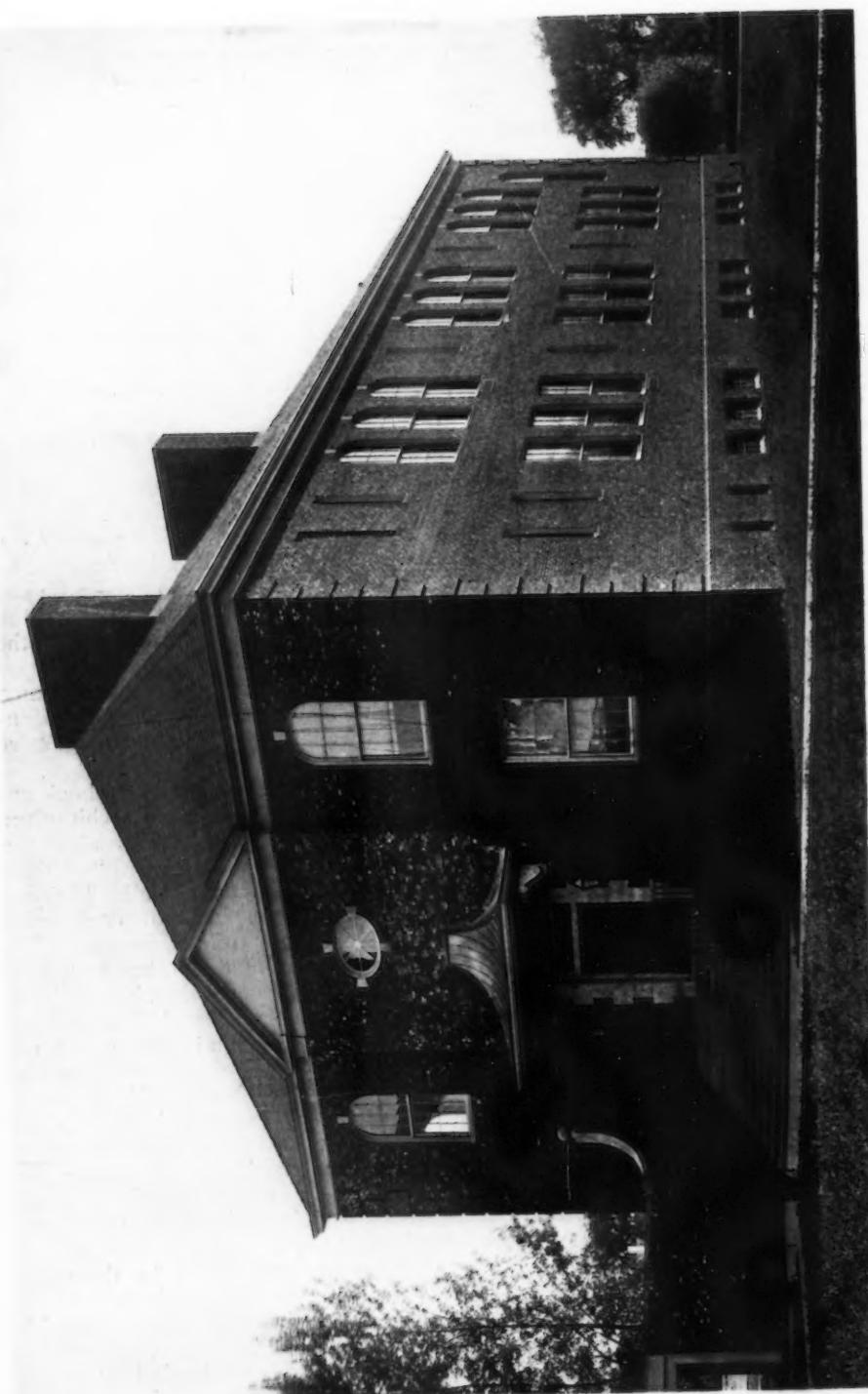
various parts. Throughout the establishment the appointments are of the most approved modern character, as determined by the State educational authorities, and the details of heating, lighting, ventilation and furnishing leave nothing to be desired. Besides adequate provision for the daily welfare of the pupils the comfort of the principal and of the teaching staff has been fully considered.

So much might truthfully be said of any modern public school building designed by an architect of average common-sense and technical capacity, in accordance with the standard requirements formulated by the State authorities. Indeed, it is *all* that could be said favorably of not a few such structures. But in the case of the Kensington School there is something more to be noted.

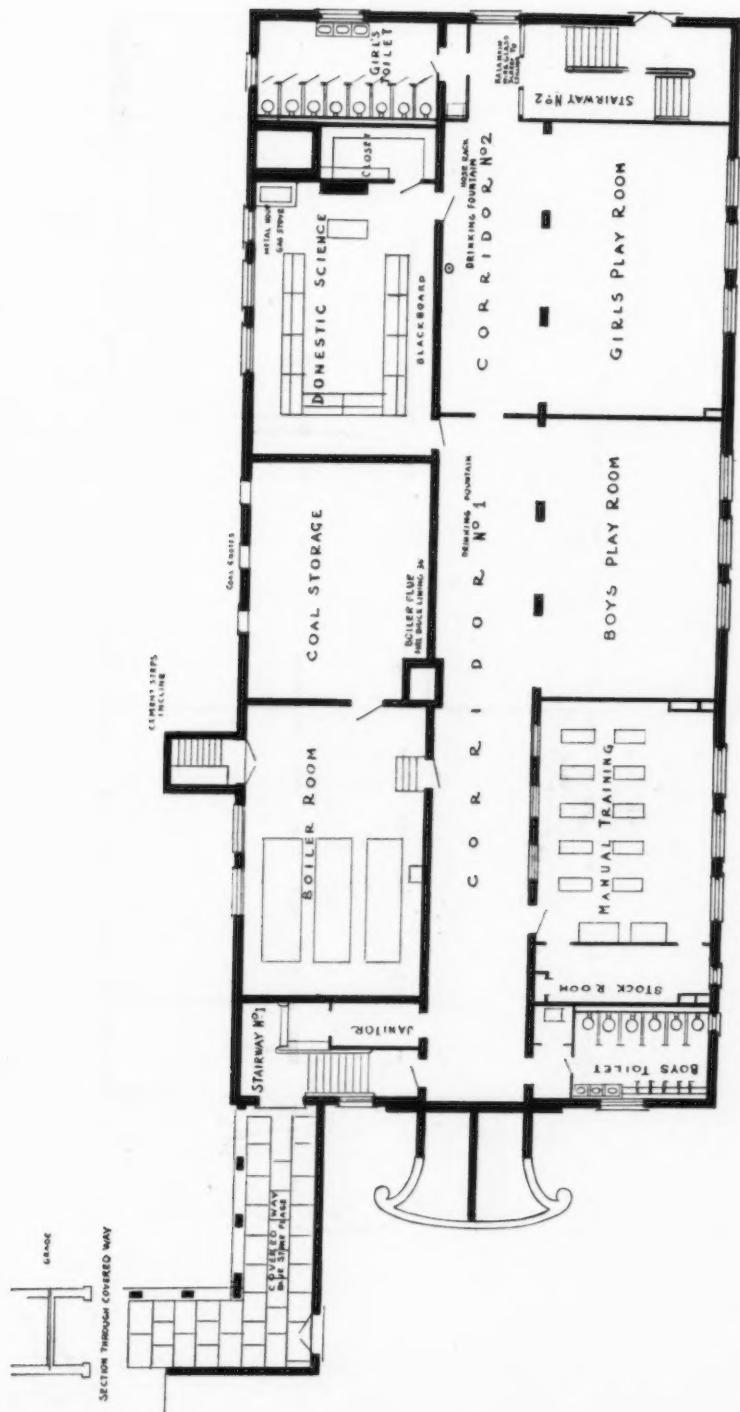
A great many of our public schools are distinctly repellent in their architectural aspect. Sometimes it seems almost a derogatory misuse of the word "architecture" to apply it to them at all. They are structures and products of engineering rather than pieces of architecture. The grace of the art of design has been altogether omitted from their scheme. They painfully resemble factory buildings. They are dismally dull, and display not one iota of the blessed qualities of inventive imagination or originality. Not a few of these deplorable examples have been, and are being, perpetrated by architects whose ability is unquestioned and whose performances in other directions amply testify to their capacity to uphold the ideals of their noble art.

Discouraged, doubtless, by the nature of the numerous and seemingly arbitrary requirements imposed upon them by school authorities, they often produce perfunctory and mechanical structures that embody those requirements and

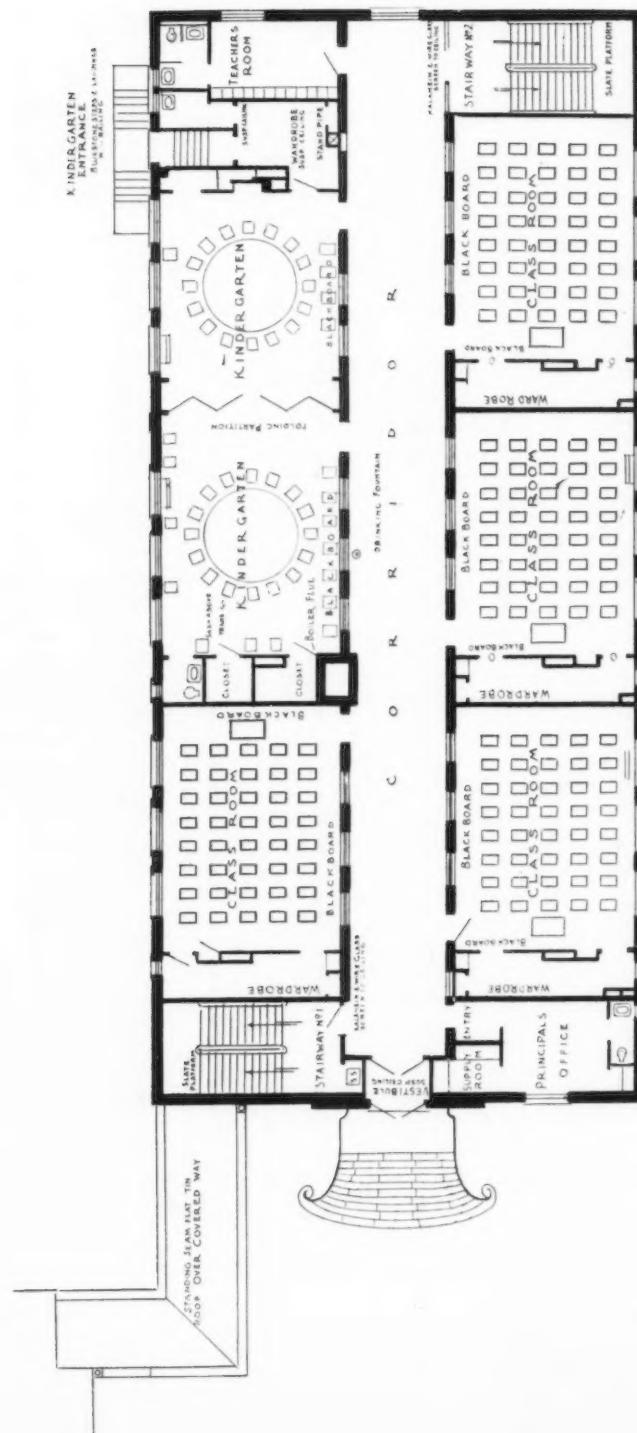
NORTH FRONT AND WEST SIDE—KENSINGTON SCHOOL, GREAT
NECK, L. T. WESLEY SHERWOOD BESELL, ARCHITECT.



two hundred



PLAN OF BASEMENT—KENSINGTON SCHOOL, GREAT
NECK, L. I. WESLEY SHERWOOD BESELL, ARCHITECT.



GROUND FLOOR PLAN—KENSINGTON SCHOOL, GREAT
NECK, L. I., WESLEY SHERWOOD BESELL, ARCHITECT.

nothing more. Such performances can never be anything nor look like anything but pot-boiling "jobs". All too often our public school structures are very marvels of bald, stupid, uncompromising ugliness.

This ought not so to be for several reasons. In the first place, during their most impressionable years, children ought not to be set in an unlovely environment that will inevitably tend to blunt their future architectural sensibilities. Furthermore, the adults of a community have a right to and should demand that public structures, paid for out of public funds to which they are obliged to contribute through taxation, shall, in some measure at least, conduce to stimulate the public architectural consciousness and elevate the public architectural conscience. Without such demand it is futile to expect that architectural consciousness and conscience—with neither of which the majority of the public at the present time seem to be grievously overburdened—will be appreciably quickened. Last of all, while no sane person would for a moment belittle the importance of making public school buildings conform in every respect to a definite set of physical, utilitarian requirements, standardized if you choose, at the same time it is clear that such conformity does not and ought not to preclude the equally important consideration of worthy design. Architecture is not mere bricks and stone, concrete and steel beams. They are necessary concomitants to its existence, but unless their physical combination is informed by a due recognition of the claims of beauty, the outcome must needs be dead, soulless and barren. The designing of public school buildings that shall comply with both physical and aesthetic standards is no less an opportunity than a responsibility laid upon the architect.

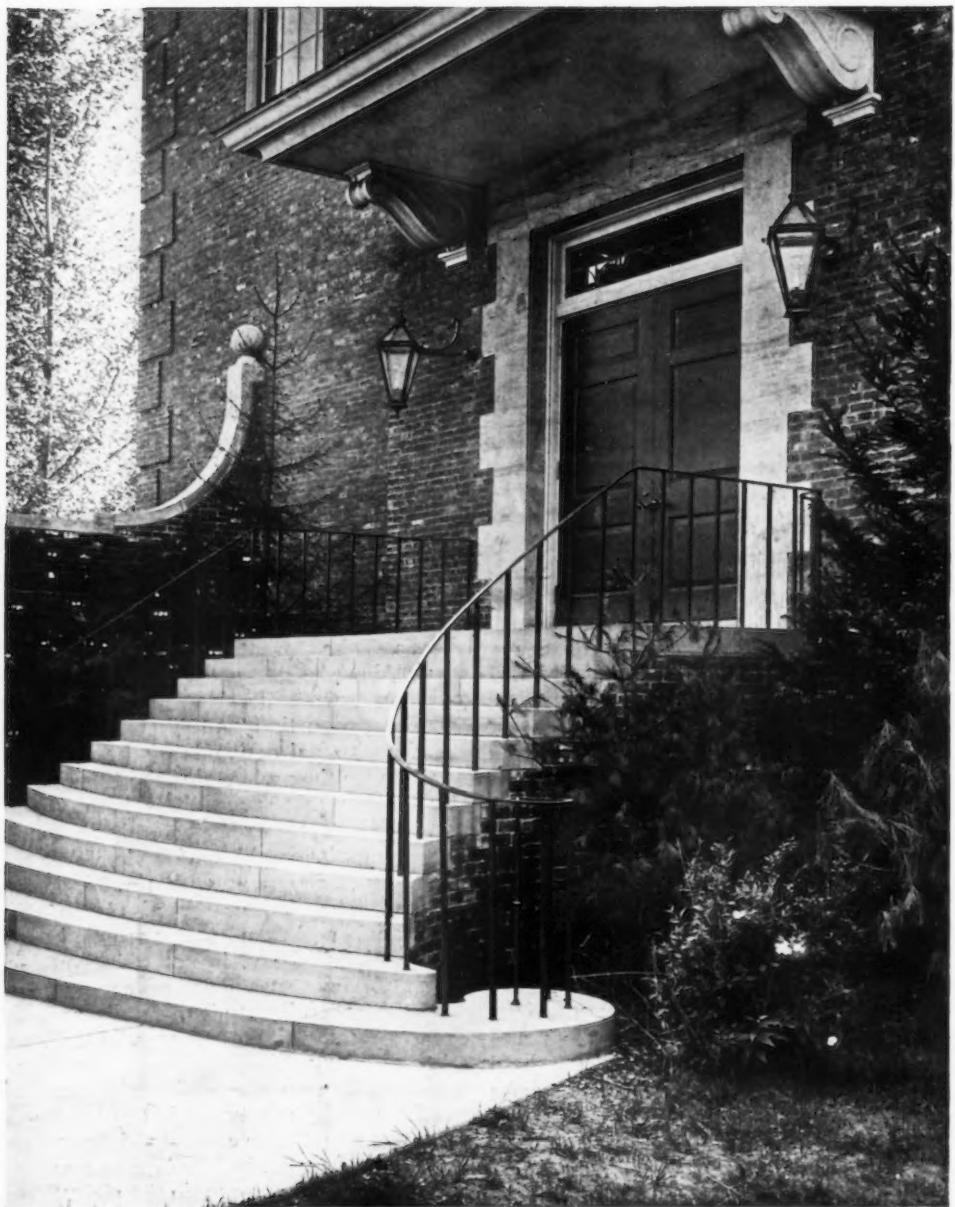
Neither need this uninspired condition exist. The rigid but inevitable requirements set by State and local educational authorities may be, in a certain sense, a handicap to the architect. Yet the presence of an obstacle, whether in matters architectural or anything else, instead of being taken as justification for shoving through a "job," "as decently as may be,

but stupidly and without distinction," should prove a fillip to ingenuity and invention. It is by such surmounting of obstacles that architecture vindicates its vitality. Then, too, a little diplomacy on the part of the architect will smooth out many a wrinkle and circumvent difficulties in the way of satisfactory design that at first glance might appear insuperable.

To take a case in point, the office of the State Board of Education, at Albany, took exception to the form of the windows as shown in the elevations for the east and west sides of the Kensington School; round-headed windows were taboo. But square-headed windows would have spoiled the design, robbing it of all individuality and making it perfectly banal. By diplomatic negotiation the architect convinced the authorities that he would give them not only the lighting area prescribed in the stipulation for square-headed windows, but also the additional area contained in the round window-heads. The upshot of it all was that he saved his design, got the round-topped windows, with piers between them of a proper proportion and likewise satisfied all the physical demands of the occasion.

Because the architect of the Kensington School has met successfully his dual responsibility, toward physical character and toward amenities of style alike, the building is pregnant with timely significance. The design, reminiscent of Sir Christopher Wren and the Cathedral Close at Salisbury, is not only convincing and virile as a piece of composition, but the carefully studied details and the satisfying texture of the walls call for sincere commendation.

The texture of the brickwork is not due to the use of any special kind of brick, but to accepting the average bricklayer as a creature of ordinary intelligence actuated by an honest impulse to do the right thing, given the proper direction. It is the fashion to decry the indifferent attitude of the modern artisan toward his work and to lament the loss of a true spirit of craftsmanship in our degenerate times. As a matter of fact, the average workman of the present day has not a whit less innate intelligence than his predecessor of



NORTH DOOR DETAIL—KENSINGTON SCHOOL, GREAT
NECK, L. I. WESLEY SHERWOOD BESELL, ARCHITECT.

EAST FRONT—KENSINGTON SCHOOL, GREAT NECK,
L. L. WESLEY SHERWOOD BESSELL, ARCHITECT.





KINDERGARTEN SCHOOL—KENSINGTON SCHOOL, GREAT
NECK, L. I. WESLEY SHERWOOD BESELL, ARCHITECT.



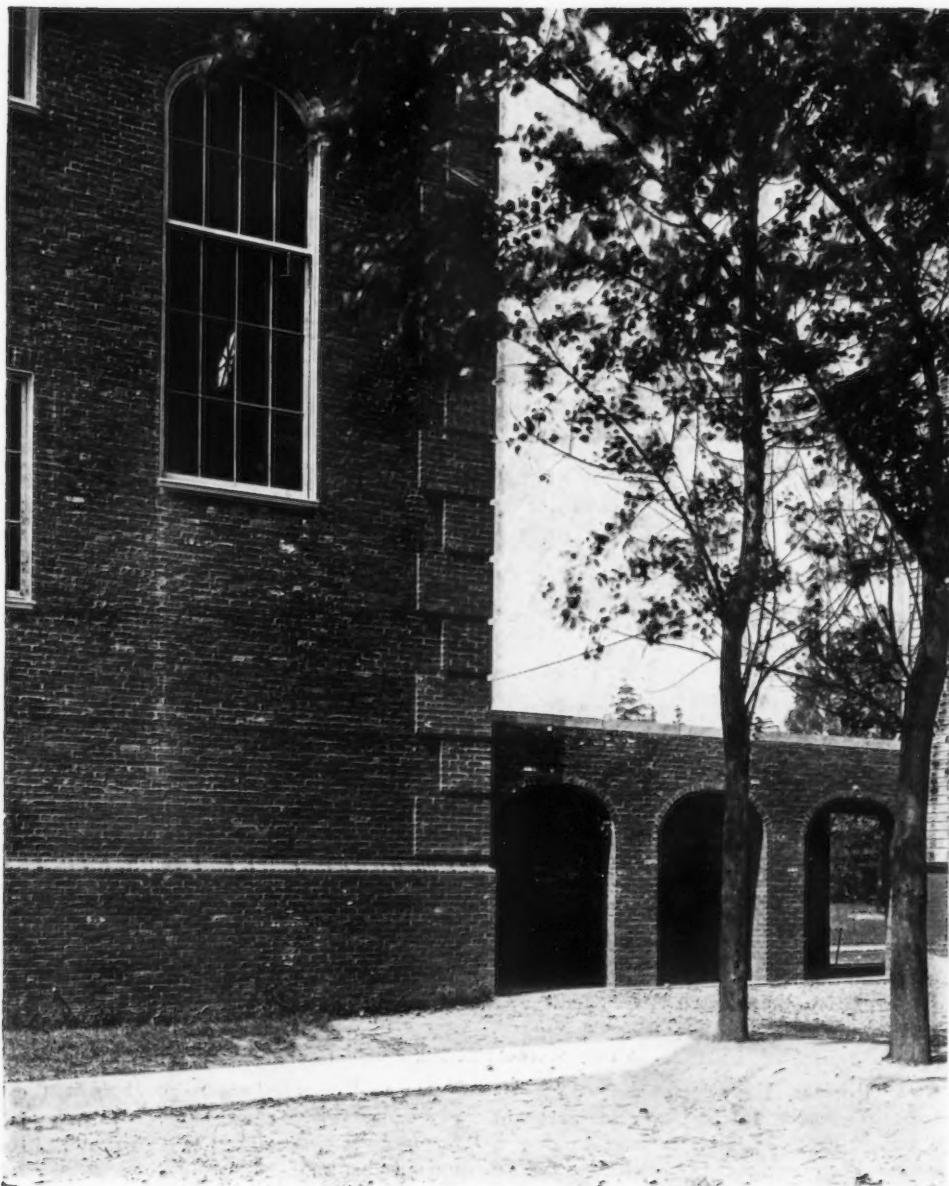
GIRLS' ENTRANCE—KENSINGTON SCHOOL, GREAT NECK, L. I.
Wesley Sherwood Bessell, Architect.

past centuries. His alleged lack of craftsmanship sense and of pride in achievement in which he differs, or is said to differ, from his predecessor, is often attributable in reality to the absence or seeming absence of interest on the part of those who employ him. This apparent absence of interest is a thing that can be overcome in the routine course of superintendence. Once the men see that their individual handiwork is a matter of interest and concern to the architect; once they are shown exactly what effect is desired and are

two hundred seven

instructed clearly how to produce it, they generally prove responsive and an *esprit de corps* is engendered that cannot fail of useful results.

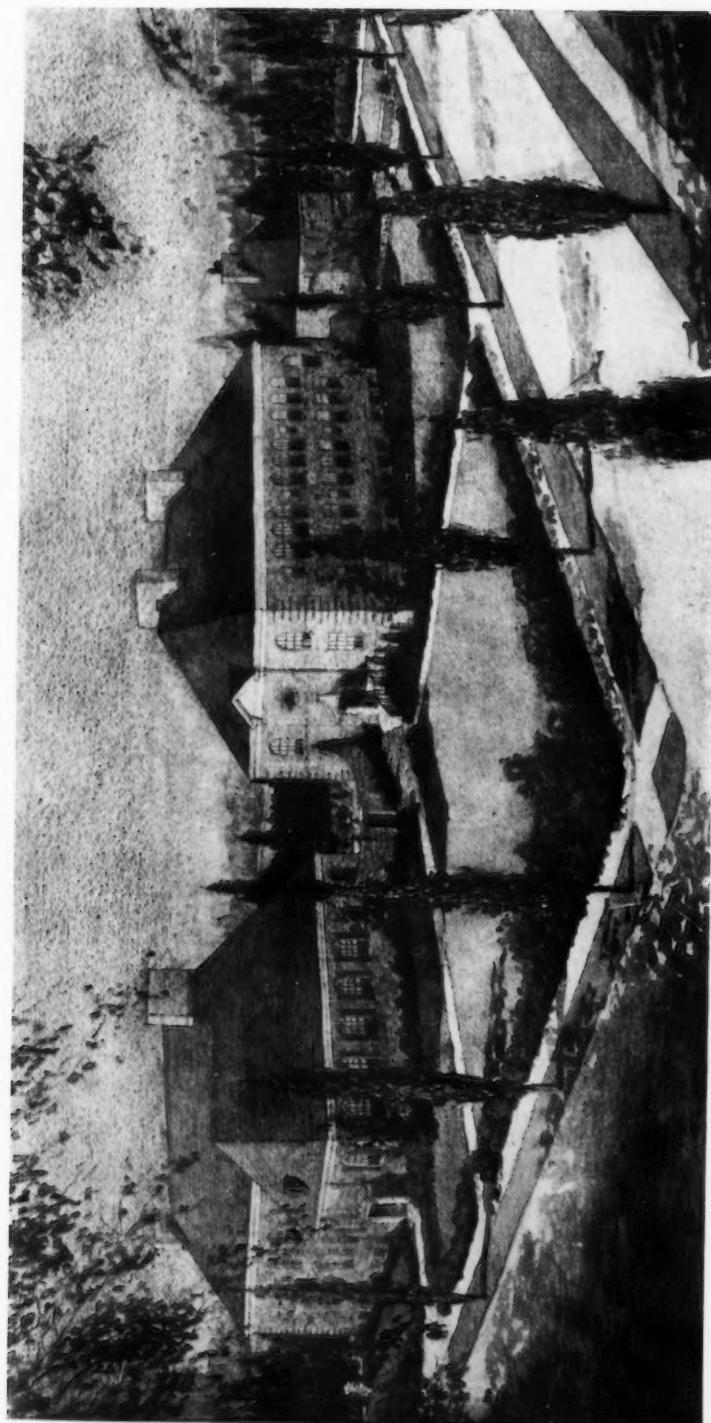
Whilst the Kensington School was a-building, Mr. Bessell followed his usual practice and made a point of personally showing the foreman bricklayer exactly what he wished done and how to do it. He also made a point of knowing each individual bricklayer from the foreman down, and tactfully created a cordial atmosphere. Some of the men, perhaps,

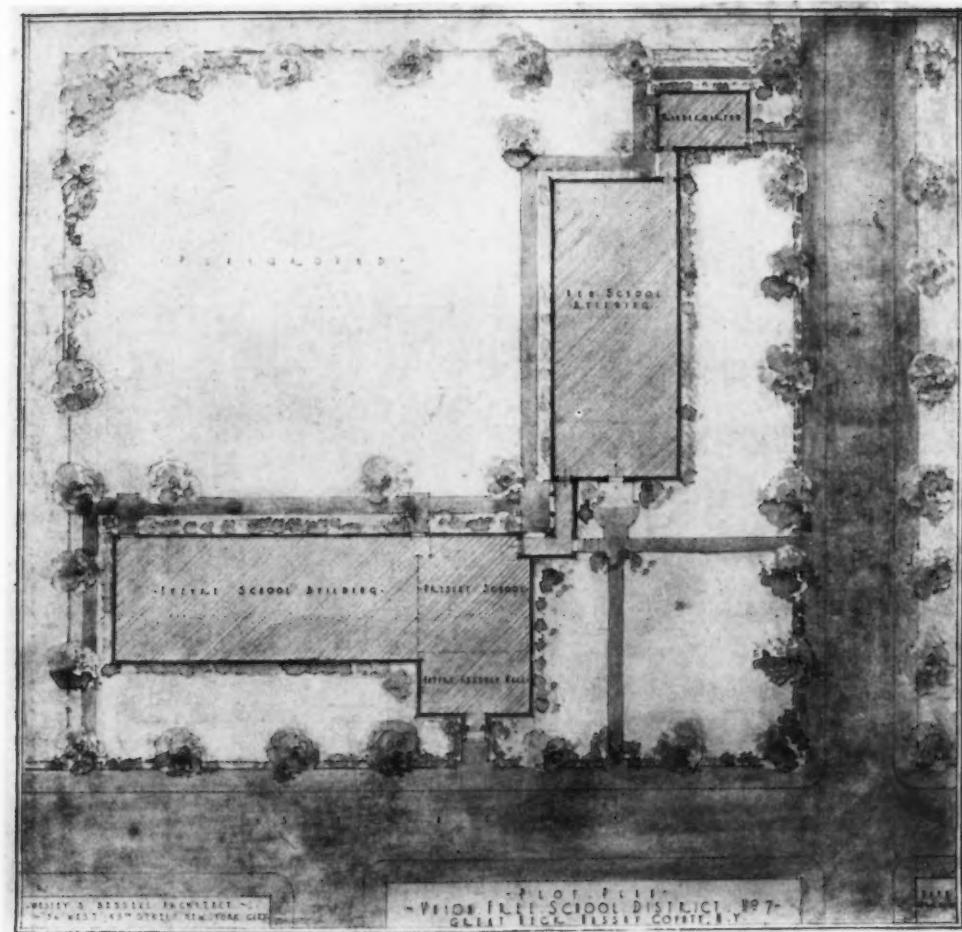


NORTHEAST ANGLE AND ARCADE—KENSINGTON SCHOOL, GREAT
NECK, L. I. WESLEY SHERWOOD BESELL, ARCHITECT.

two hundred eight

SKETCH OF PROPOSED GROUP KENSINGTON SCHOOL, GREAT
NECK, L. L. WESLEY SHERWOOD BESSELL, ARCHITECT.





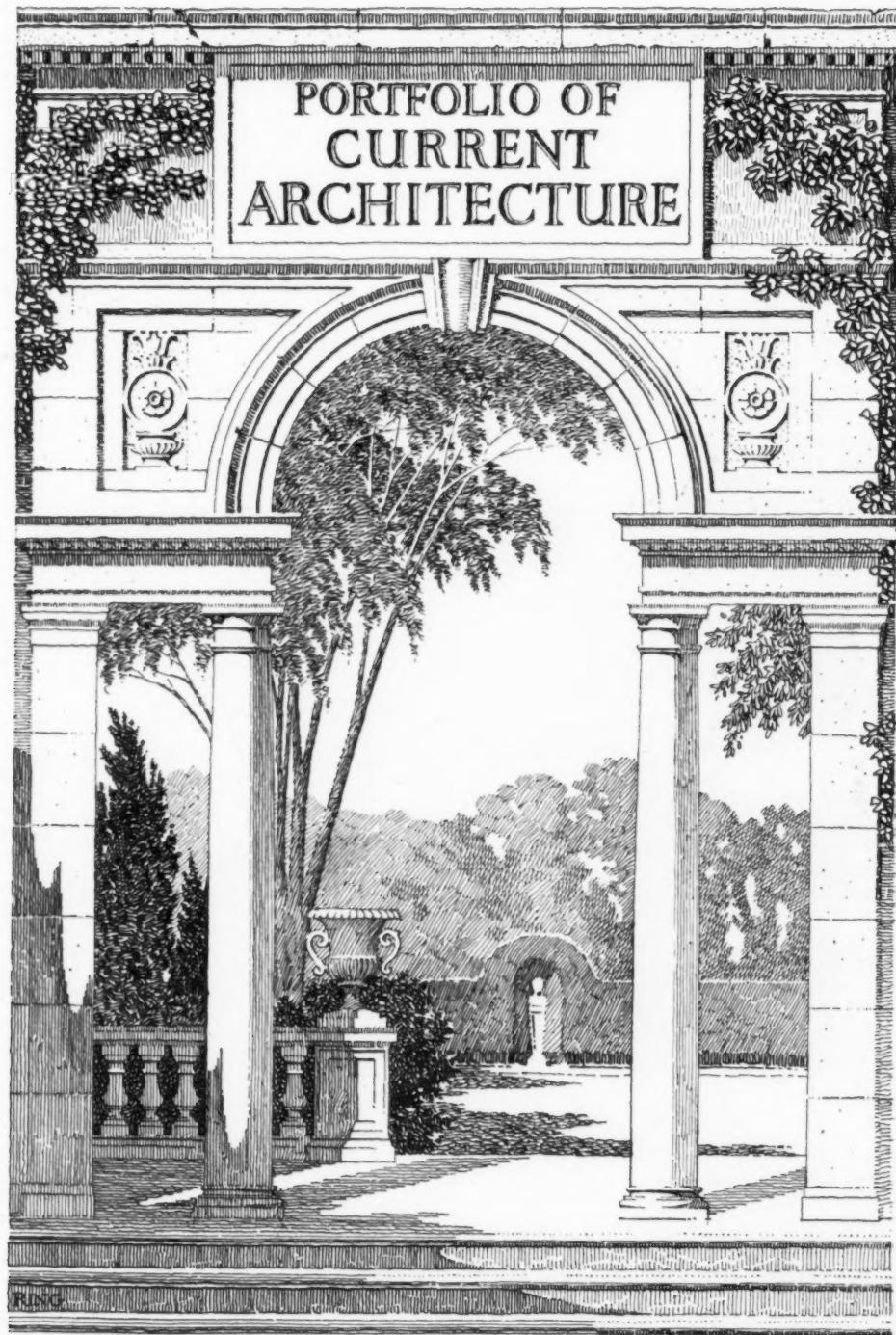
BLOCK PLAN OF GROUP—KENSINGTON SCHOOL, GREAT NECK, L. I.
Wesley Sherwood Bessell, Architect.

may not have gained an increased appreciation of the subtleties of texture, nor have felt a freshened pride in their work, but at any rate they one and all conceived a kindly feeling toward the architect, did their best to please him, and the object was achieved.

It remains to call attention to the entire group of buildings proposed for future erection to supplement the structure already completed. As the plot plan shows, there is provision for a separate kindergarten building, an assembly building, and one or two more buildings containing classrooms to take care of subse-

quent increase in the number of pupils. All of these buildings coincide in character and are designed as a coherent composition to surround two, or possibly three, sides of a quadrangle. The introduction of the collegiate scheme into public school architecture in America is a happy conception which, we believe, has not hitherto been employed. In many places it might be carried out advantageously with reference to both practical considerations and the improvement of the tone of public architecture. The aim embodied by the architect is sound in theory, and in practice can be made thoroughly engaging.

PORTFOLIO OF
CURRENT
ARCHITECTURE



two hundred eleven



STREET FRONT — HOUSES ON RITTENHOUSE ST.,
PHILADELPHIA. STEWARDSON & PAGE, ARCHITECTS.



FRONT AND SIDE-HOUSE ON RITTENHOUSE ST.,
PHILADELPHIA. STEWARDSON & PAGE, ARCHITECTS.



DOOR DETAIL—HOUSE ON RITTENHOUSE STREET,
PHILADELPHIA. STEWARDSON & PAGE, ARCHITECTS.

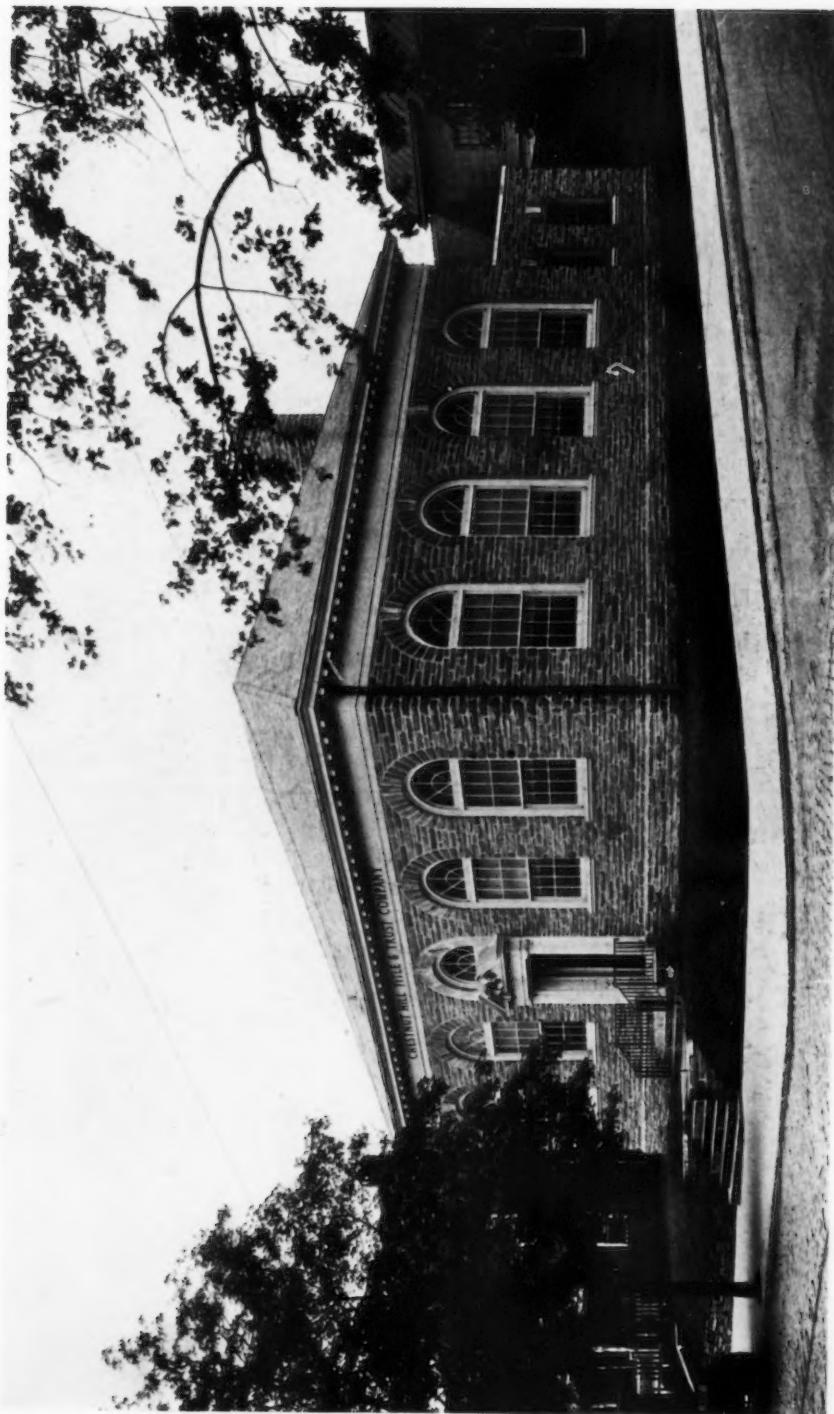


EAST END—HOUSE OF THE PENNSYLVANIA SOCIETY
OF COLONIAL DAMES OF AMERICA, LATIMER ST.,
PHILADELPHIA. HOWELL LEWIS SHAY, ARCHITECT.



NORTH FRONT—HOUSE OF THE PENNSYLVANIA SOCIETY
OF COLONIAL DAMES OF AMERICA, LATIMER ST.,
PHILADELPHIA. HOWELL LEWIS SHAY, ARCHITECT.

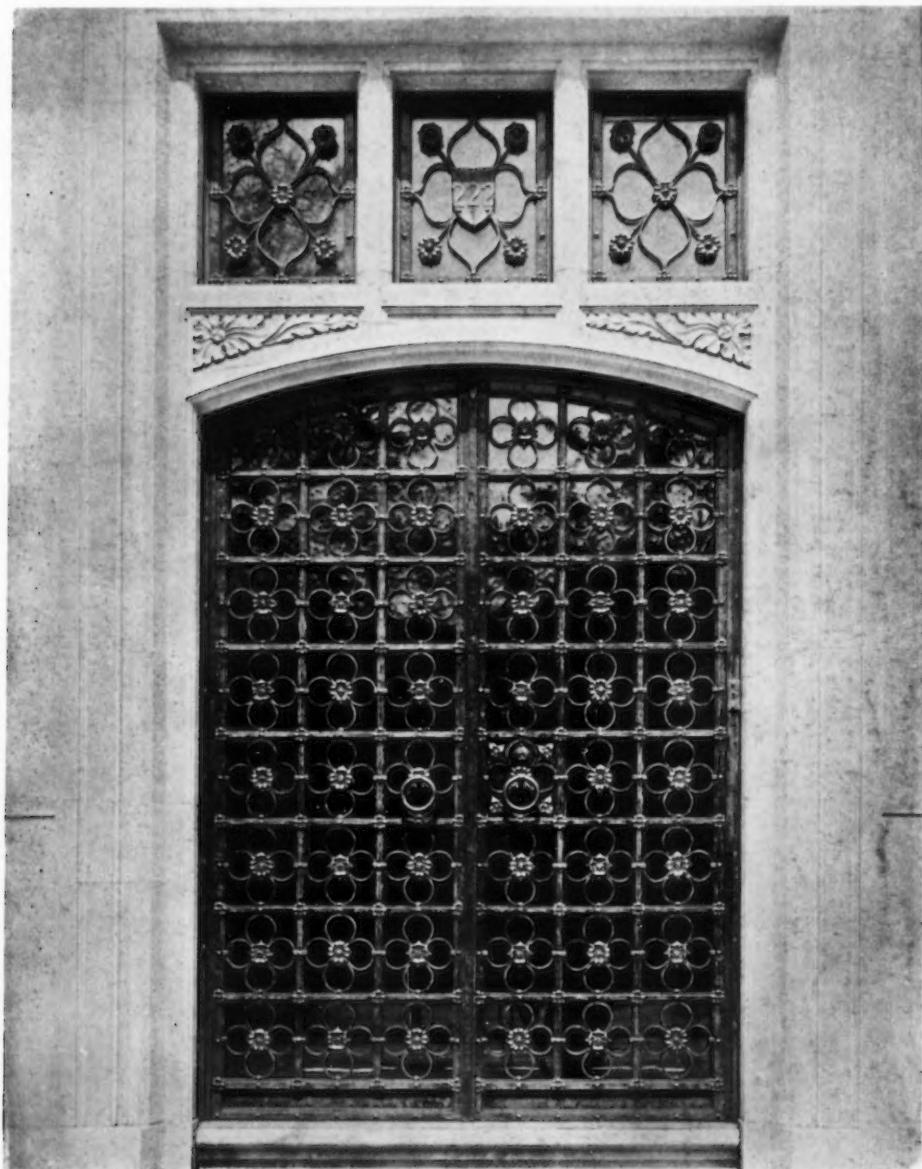
EAST AND NORTH FRONTS—CHESTNUT HILL
TRUST CO., CHESTNUT HILL, PHILADELPHIA.
ARTHUR H. BROCKIE, ARCHITECT.



two hundred seventeen



DOOR DETAIL—CHESTNUT HILL TRUST
CO., CHESTNUT HILL, PHILADELPHIA.
ARTHUR H. BROCKIE, ARCHITECT.



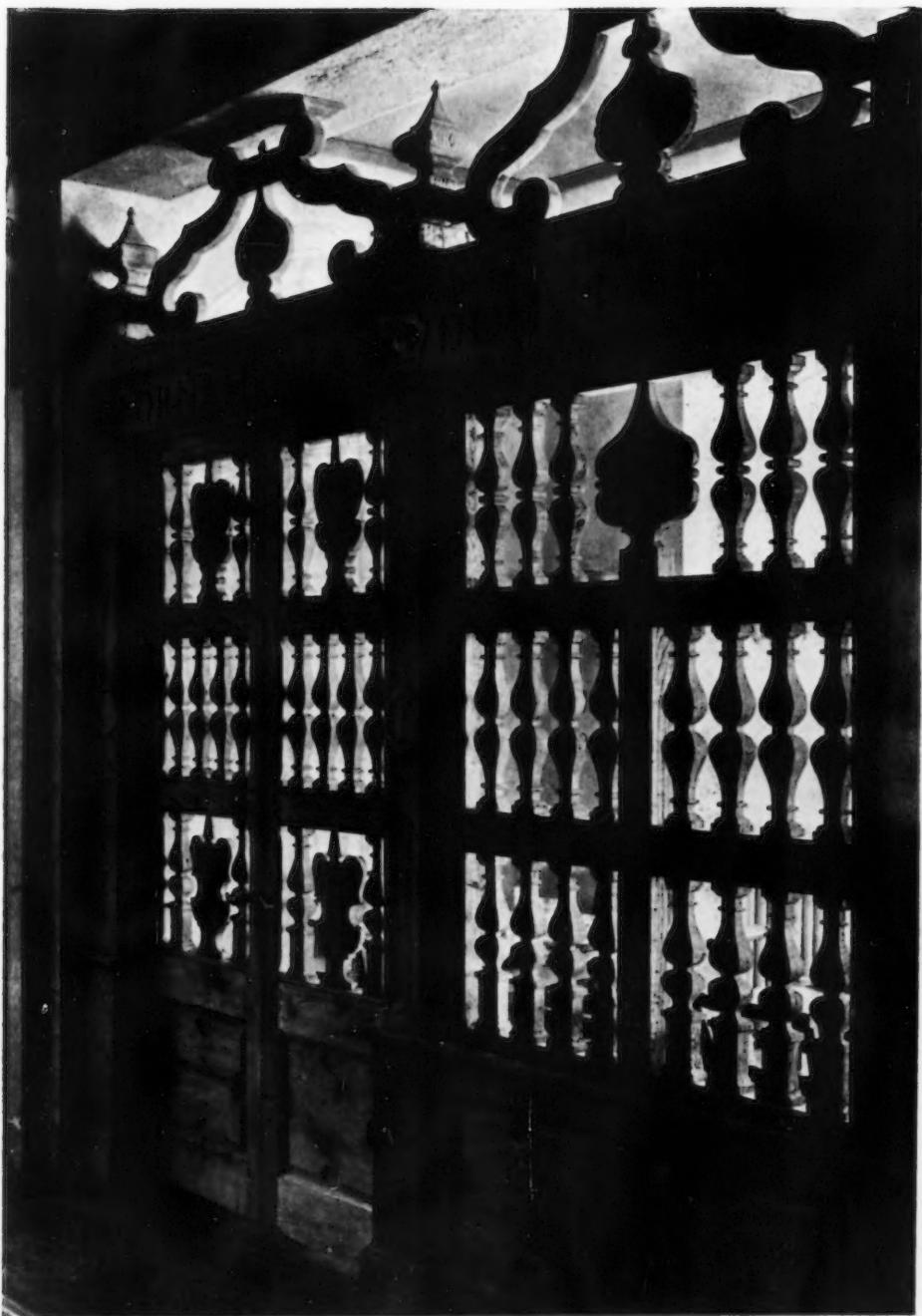
WROUGHT IRON GRILLE — RESIDENCE OF F. W.
ROEBLING, ESQ., TRENTON, N. J. SPENCER
ROBERTS, ARCHITECT. SAMUEL YELLIN, CRAFTSMAN.

two hundred nineteen



WROUGHT IRON GRILLE—RESIDENCE OF B. F.
JONES, ESQ., SEWICKLEY, PA. HISS & WEEKS,
ARCHITECTS. SAMUEL YELLIN, CRAFTSMAN.

two hundred twenty



DETAIL—WOODEN SCREEN, COSMOPOLITAN CLUB,
NEW YORK CITY. THOMAS H. ELLETT, ARCHITECT.



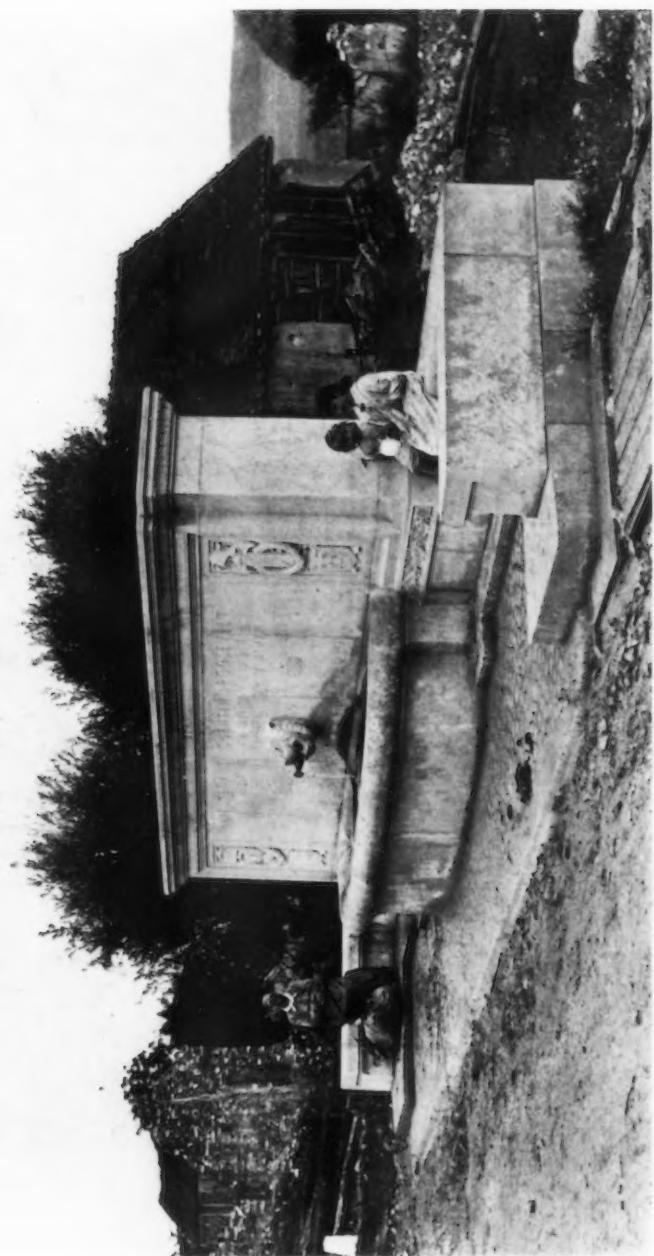
DETAIL—WOODEN SCREEN, COSMOPOLITAN CLUB,
NEW YORK CITY. THOMAS H. ELLETT, ARCHITECT.

two hundred twenty-two

ROOD SCREEN—ST. GREGORY'S CHURCH, HARRISON,
N. Y. WILFRID E. ANTHONY, ARCHITECT.



FOUNTAIN - CHAMERY, MARNE, FRANCE.
MEMORIAL TO QUENTIN ROOSEVELT.
PAUL PHILIPPE CRET, ARCHITECT.





PULPIT — MEDIATOR CHAPEL OF HOLY
TRINITY PARISH, PHILADELPHIA. THOMAS,
KIRKPATRICK AND MARTIN, ARCHITECTS.



ALTAR AND REREDOS—MEDIATOR CHAPEL OF
HOLY TRINITY PARISH, PHILADELPHIA. THOMAS,
KIRKPATRICK AND MARTIN, ARCHITECTS.

two hundred twenty-six



OLD HOUSE AT ALGONAC

▼ *The OLD HOUSES of MICHIGAN*



By

Fiske Kimball

IT is little suspected that states beyond the Alleghenies and the Ohio contain old mansions of great dignity and beauty. "Some specimen of the Dark Ages in the depths of the Middle West" is what the jury of an American scholarship competition feared, when it was proposed to have each contestant submit drawings of a building in his own locality. Just how horrible many such specimens really are is revealed by our own view of the beautiful old house at Algonac, built about 1850.

Only for the South has it been discovered hitherto that the settlements of the first half of the nineteenth century have buildings comparable in artistic value to those of the original seaboard

two hundred twenty-seven

colonies. Even natives of the old Northwest Territory themselves have scarcely opened their eyes to the heritage of fine early dwellings which they possess, and to the precious local traditions which these embody. Along the century-old National Highway through Ohio, in backwaters of Indiana, even in Wisconsin, are many taverns and houses which arrest the eye by their sympathetic handling of materials and their just proportions. None of these regions, however, compares with Michigan in its wealth of interesting buildings, very remarkable for unity and persistence of classic style.

The belief has been widespread that the passing of the Colonial and post-Colonial styles marked the end of healthy



JUDGE SAMUEL DEXTER HOUSE, DEXTER. THE DORIC TEMPLE PORTICO, FULL SIZE COLUMNS IN WIDTH.

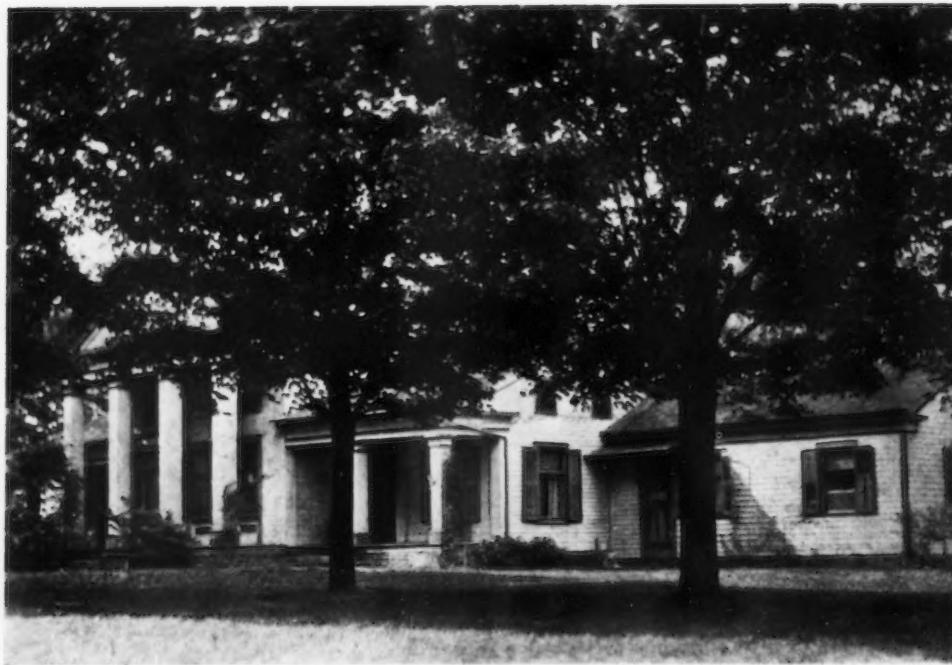
development of traditional art as an outgrowth of contemporary culture, and that the classic revival which succeeded it was an exotic with no firm roots in American civilization. It is overlooked that the Revolutionary patriots—the "Cincinnati"—persistently, sophomorically identified themselves with the heroes of the Roman republic, and that the leaders of thought in the thirties had a consciousness of solidarity with ancient Greece which touched every department of life. At the time of the war of Greek independence, as Mr. John Bassett Moore has pointed out, American sympathy was so great that a gentleman from western New York declared he could furnish, from his sparsely settled region, "five hundred men six feet high, with sinewy arms and case-hardened constitutions, bold spirits and daring adventurers who would travel upon a bushel of corn and a gallon of whiskey per man from the far end of the earth to Constantinople."

The same philhellenism prevailed in intellectual and artistic matters. Joel Barlow dreamed of a national epic. The initiative of amateurs and laymen, such as Thomas Jefferson and Nicholas Biddle, established the form of the classic temple—deep and narrow, with columns and pediment at the front—as a single unconditional ideal for all buildings. There is a rich variety of examples to our hand. The Virginia Capitol at Richmond, designed by Jefferson in 1785, was a model of the *Maison Carrée*; the United States Bank in Philadelphia, built in 1819 to 1826, a model of the Parthenon; the Connecticut Capitol at New Haven, 1829, a model of the Theseum; the French chapel in New York, a model of the Temple of the Wingless Victory. Dwellings, even, followed the same examples. Jefferson, in 1819 to 1825, housed the professors at the University of Virginia in little temples, and Biddle showed his devotion to the classic ideal



DOORWAY—DEXTER HOUSE.

two hundred twenty-nine



SMITH HOUSE, GRASS LAKE. NORMAL TYPE WITH TWO WINGS.

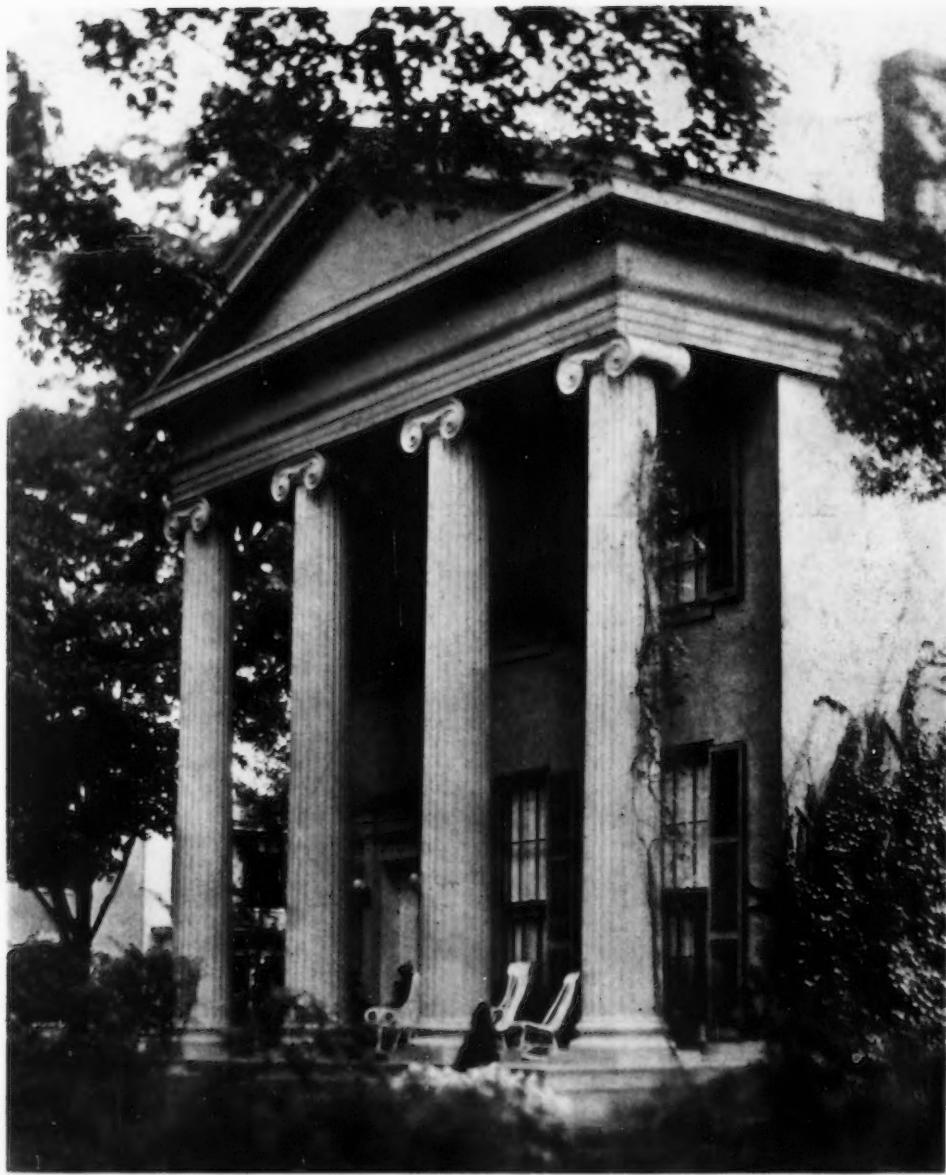
by building a wing to his residence, in 1834, on the pattern of the Theseum, peristyle and all.

When the wave of Eastern emigration of the thirties swept out along the newly opened Erie canal and across the lakes, it brought with it this ruling ideal. In Michigan, Greek enthusiasm was particularly strong. The names of towns—Ypsilanti and Byron, Ionia and Scio—perpetuate famous personalities and places in the Greek struggle for freedom. Judge Woodward in his first sketch for the organization of the state university, preferred for it a Greek title, the *Catholepistemiad!* When the institution came actually into being, its several departments were housed in as many porticoed temples of the Muses. Little after the log cabins of the first settlers, side by side with them in many instances, rose ambitious dwellings in the form of the temple. Along the old stage roads of 1840 from Detroit—the Chicago Road through Saline, Tecumseh and Coldwater, the Grand River Road to Lansing, the Territorial Road through Ypsilanti, Ann

Arbor, Jackson and Marshall to St. Joseph—they still stand with their simple lines and classic detail as memorials of a bygone era, almost of a vanished civilization.

It was the men of solidity and culture who took the lead in building fine houses, the governors, the judges, such as Samuel Dexter, whose patriarchal mansion overlooking the town which bears his name is perhaps the amplest and most imposing of all the houses in the state. In the absence of professional architects, but with the aid of popular handbooks of the Greek orders, and of carpenters and masons who had learned their trades in New England and New York, they built in the wilderness houses for which there was no need to blush before their most cultivated guests from the East.

The house of the period, with few exceptions, had its main mass in the proportions of a temple: rectangular, deep and narrow, its gable to the street; in contrast with the Colonial house which turned its broad side, with level eaves, to the front. Sometimes this main block



JUDGE WILSON HOUSE, ANN ARBOR. PUREST IN GREEK DETAIL OF THE MICHIGAN HOUSES.

alone constituted the entire house. More frequently there was a subordinate wing on one side, or on both. Ordinarily such a wing was also gabled, its ridge at right angles to the main house, and was fronted by a narrow, pillared porch with horizontal cornice. Where means permitted,

two hundred thirty-one

the house proper was fronted by a portico of its full width, most commonly with a single order rising through the full heights, as in the temple, although sometimes with an order but one story in height, or two orders superposed.

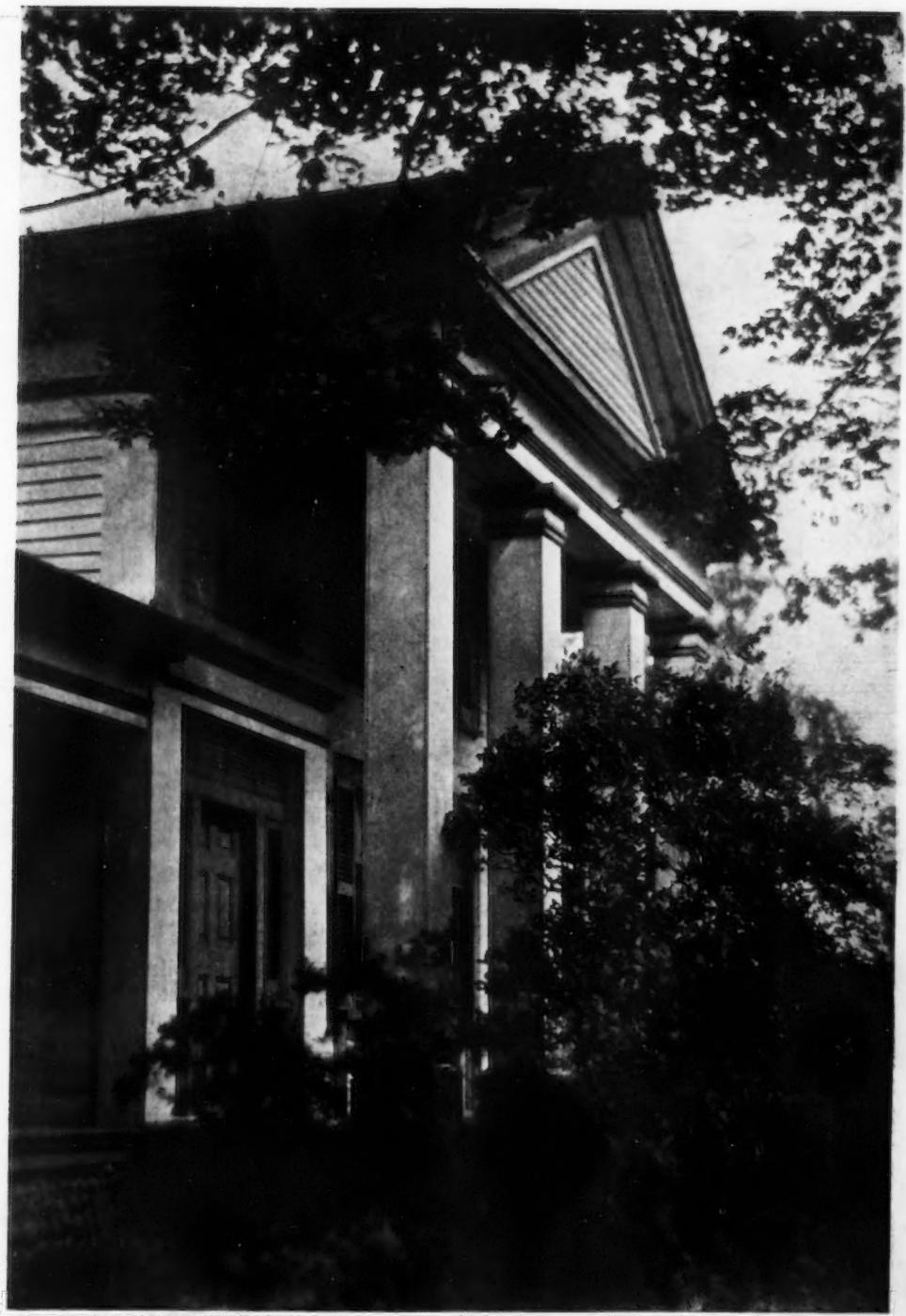
In the most ambitious houses the



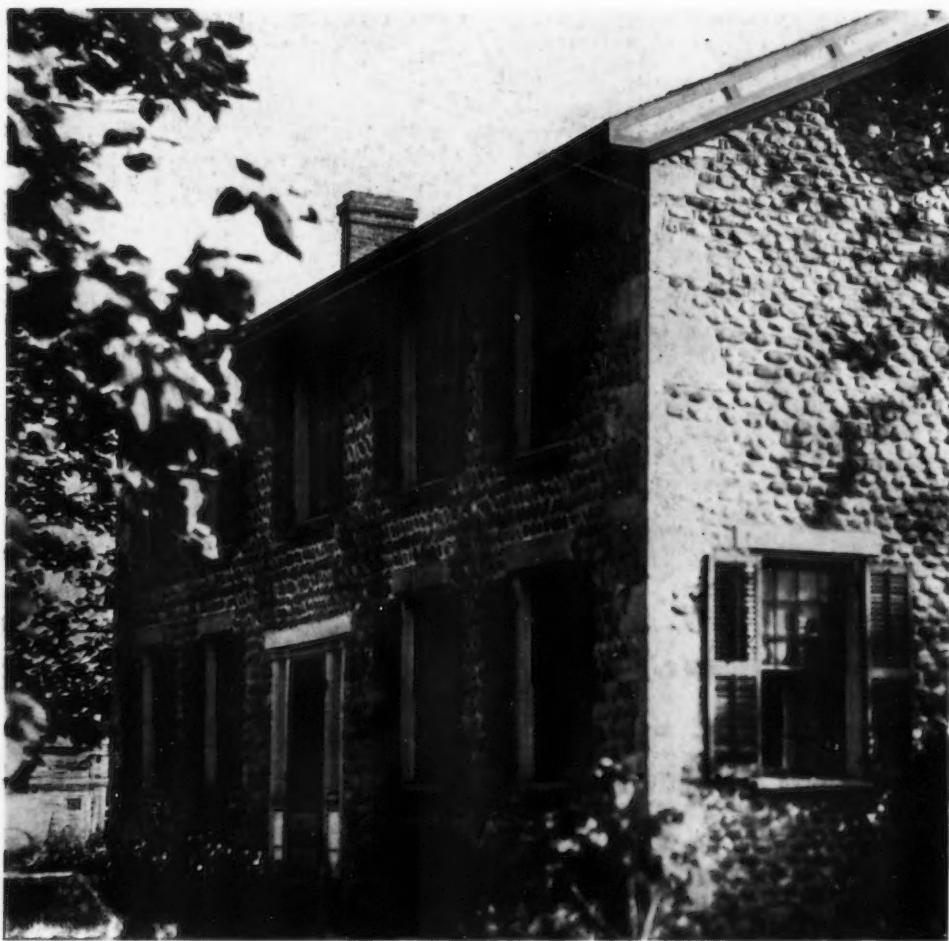
HOUSE ON THE ROCHESTER-PONTIAC ROAD. NORMAL TYPE IN BRICK.
(OLD SHATTUCK HOUSE)



THE BENNETT (KEMPF) HOUSE, ANN ARBOR. THE TEMPLE IN VERNACULAR. THE ANTA CAPITALS ARE PROFILED ENTIRELY WITH PLAIN CHAMFERS AND FILLETS.



SMITH HOUSE, GRASS LAKE. DETAIL OF CENTRAL PORTICO AND DOORWAY.
two hundred thirty-three

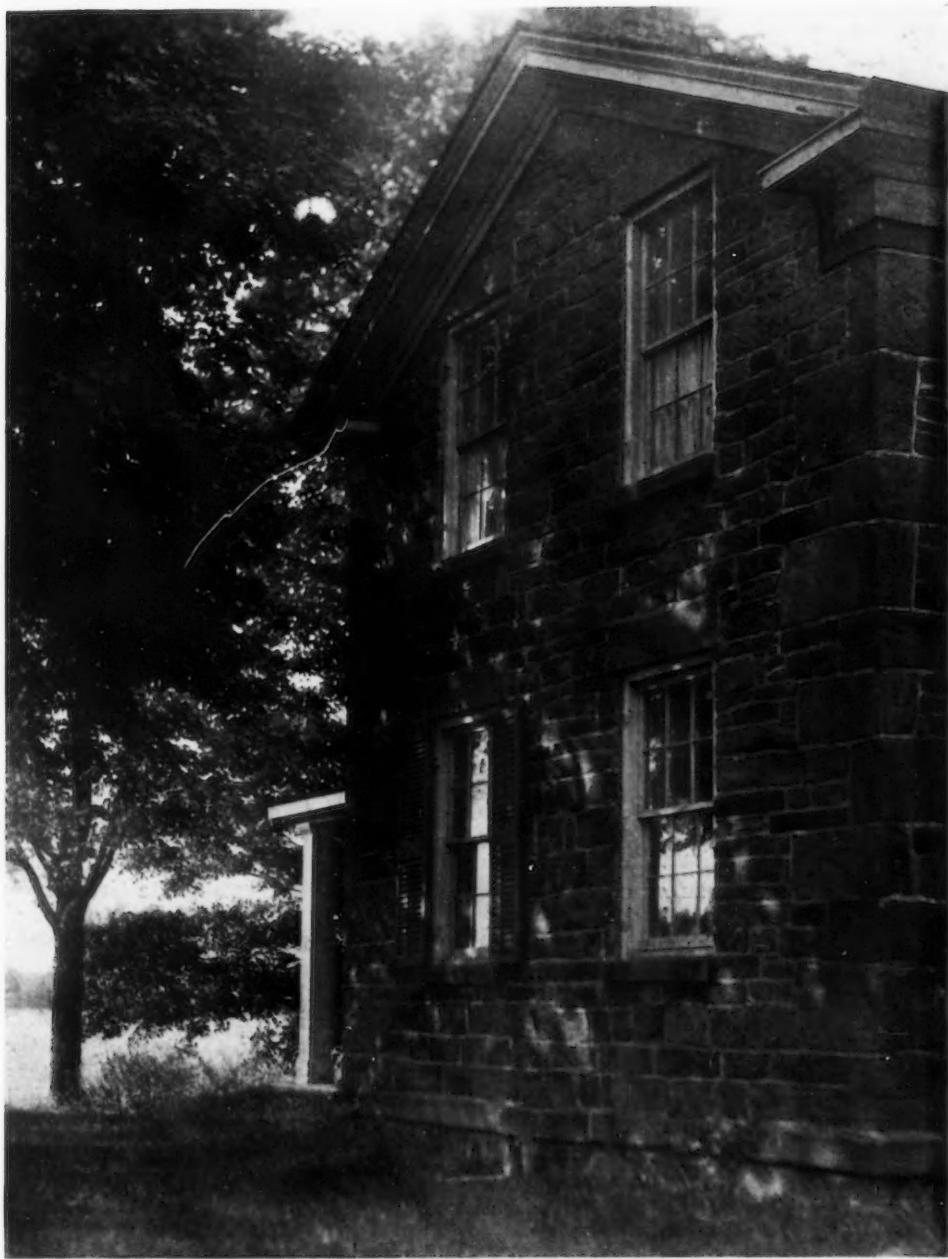


HOUSE ON THE RIVER ROAD BETWEEN ANN ARBOR AND YPSILANTI. GLACIAL PEBBLES
IN LEVEL COURSES AND HERRING-BONE PATTERN.

Greek orders were reproduced with great literalness from the admirable plates of the handbooks, with circular fluted columns and finely profiled bases and capitals. Nowhere were proportions and details followed more closely than in the house of Judge Robert S. Wilson at Ann Arbor, seat of the University, who purchased the lot in 1836. Here there are four tall columns of the Ionic order rising through two stories. There are no wings—it is the "Temple of the Wingless Victory". In the Village Farm at Grass Lake, owned by Mr. John S. Fields of Chicago, the main columns are

more slender and a smaller order, likewise Ionic, fronts one-story wings on either side. In the Dexter house the great order is a slender Doric, unique in Michigan in being six columns wide, with subordinate Doric porches running back along both sides of the main mass. Mrs. Julia Dexter Stannard writes. "It was built between 1840 and 1843. The plans were made by my father and mother, modelled somewhat after my father's old home on Beacon Street, Boston."

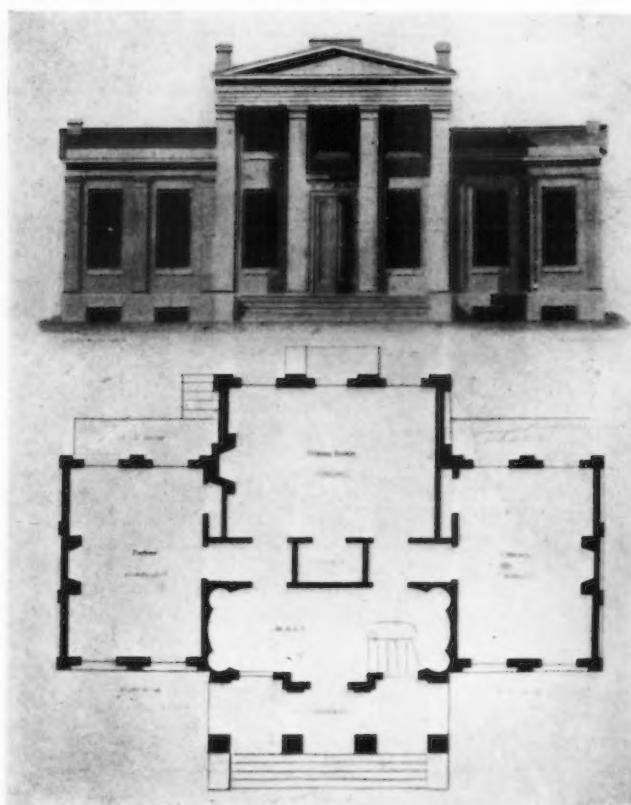
Circular columns of correct detail were sometimes, but rarely, used in smaller dwellings. The finest example, before



JOHNSON HOUSE, BATTLE CREEK. THE TEMPLE SCHEME IN SEAM-FACED RUBBLE.

its remodelling, was the one story central portico of the little house on the Pontiac Road in Ann Arbor built by Thompson Sinclair, who came to the town in 1840,
two hundred thirty-five

married in 1843 and sold the house in 1845. In the Chapel house, eight miles west of Jackson, on the Territorial Road, with its stone lintel inscribed "Caleb M.



FRONTISPICE OF MINARD LAFEVER'S "THE MODERN BUILDERS' GUIDE," 1833. THE PROTOTYPE OF THE SMITH HOUSE AT GRASS LAKE.

Chapel, June 1850," the wings only were fronted, until 1918, with porches of circular Doric columns.

Much more often, at just the same period, the order was modified to suit lesser means and lesser pretensions. Square piers were substituted for the columns, the anta capital was used to crown them, with results of surprising artistic merit. The device was no mere makeshift of the frontier: the frontispiece of Minard Lafever's "Modern Builder's Guide," published in 1833, shows the metamorphosis already accomplished, and houses illustrating it may be found within a few miles of New York City,—for instance one at Rahway. It can scarcely be doubted that this very plate of Lafever was in the hands of the builders of the

house at Grass Lake erected for Sidney Smith in 1840. His son, who still owns and occupies it, testifies to the date as well as the names of the workmen: Silas Winchester, head carpenter, Levi Babbitt, mason. In number and position its supports correspond exactly with those of the Village Farm close by, although wing is multiplied beyond wing as in no other house. A house just west of Lansing on the Grand River Road, likewise with symmetrical wings, has the main portico of square antae superposed in two stories; in many less ambitious examples it is completely omitted, the porches running only along the wings. This scheme, with antae and but a single wing, is indeed the commonest of all.

Other liberties were taken with the classical forms as the Greek style passed, like the Colonial before it, into vernacular use. In some cases the proportions were radically modified, with results nowhere more piquant than in the little house in Ann Arbor occupied in the middle of the last century by H. D. Bennett, Secretary of the University. Instead of two full stories below the cornice, the house has its upper story in the roof, with small "frieze windows"—all too near the floor—screened by delicate iron gratings designed on the motive of the Greek anthemion. Sometimes, again, the antae were made more slender than the classic proportion, as in the house at Algonac. Elsewhere it was the horizontal divisions of the temple which were varied. It was not always assumed that there must be an even number of piers and an odd number of openings to the gabled façade.



FRONT ELEVATION—WEBSTER-BREAKY
HOUSE, ANN ARBOR, MICH.

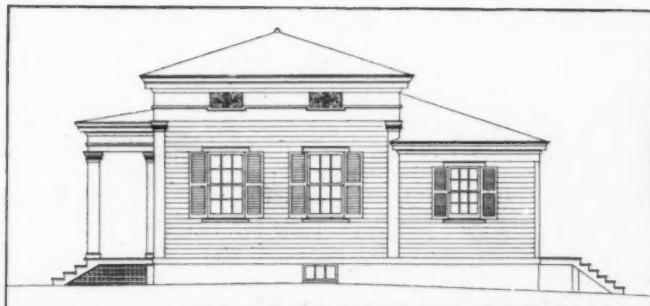
Since the main block generally had a width of but one room beside the hallway, the main door was at one side of the front, and there could be a portico of two bays, with three antae—one in the centre—as in small houses at Dexter and elsewhere. These reverted, quite unconsciously, to the scheme of the primitive Greek temple. Finally, in many minor houses, there was a total absence of any curved mouldings, the subtle effects of Greek profiles being approximated remarkably well by ingenious use of mere square fillets and sloping chamfers. Thus the classic revival by no means meant death to local and individual freedom.

Further possibilities for variety, even within the temple type, lay in the choice of materials, several of which were often available in a single locality. Wood was the most common but by no means universal. Brick was frequently used, either by itself or covered with warm stucco. Stone was employed in many different ways, conforming partly to local conditions. Thus small rounded glacial stone was laid up in thick mortar, like brick, and also in herringbone pattern—the *opus spicatum* of the Romans, if the builders but knew it. This is a local manner of work found also in central New York, and re-

two hundred thirty-seven

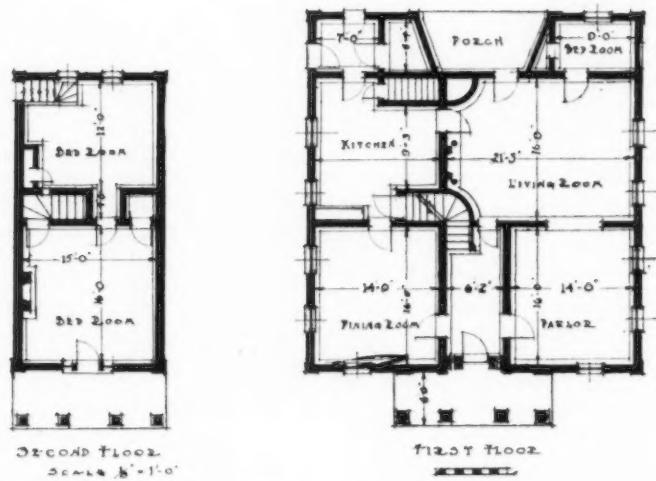
peated here like so many other traits of the region from which the settlers came. Just east of Battle Creek a quarry of stratified ledge stone was responsible for some fine rubble walls. The Johnson house there, built in 1840 by a mason named Lawson, has little to lose in comparison with the finest work of the kind in Pennsylvania. In the Chapel house near Jackson, regular coursed ashlar was ambitiously adopted, coupled with some crude attempts at decorative relief sculpture. With such a range of materials, even when used merely in ringing the changes on but one basic theme, the number of permutations was infinite. As a matter of fact, among all the similar houses, no two are alike.

Aside from the scheme of the temple, with its longitudinal axis, classicists the world over preferred a centrally balanced arrangement about a vertical axis. Such a scheme—most highly developed, with a dome, in Palladio's Villa Rotunda—found its homelier expression in America in the octagonal house. The vogue of this form here, goes back, like that of the temple, to the initiative of Jefferson, who, in his little known plantation of "Poplar Forest," realized, during the years following 1806, the paper projects of Italian and English academic theorists. Few old Michigan towns failed to contain one or more houses which were octagonal. Ann Arbor had one until a few years ago, built by Alexander Winchell, professor of geology from 1854 to 1872,



SIDE ELEVATION—WEBSTER-BREAKY HOUSE
ANN ARBOR, MICH.

From measured drawing by John B. Jewell. Note the "contrast between its grave regularity and the fantastic wooden grilles of its frieze windows."



PLANS OF THE THOMPSON SINCLAIR HOUSE
1245 PORTAGE AT ANN ARBOR MICH.

BUILT IN 1845

MEASURED AND DRAWN BY L.T. VOORHEES.

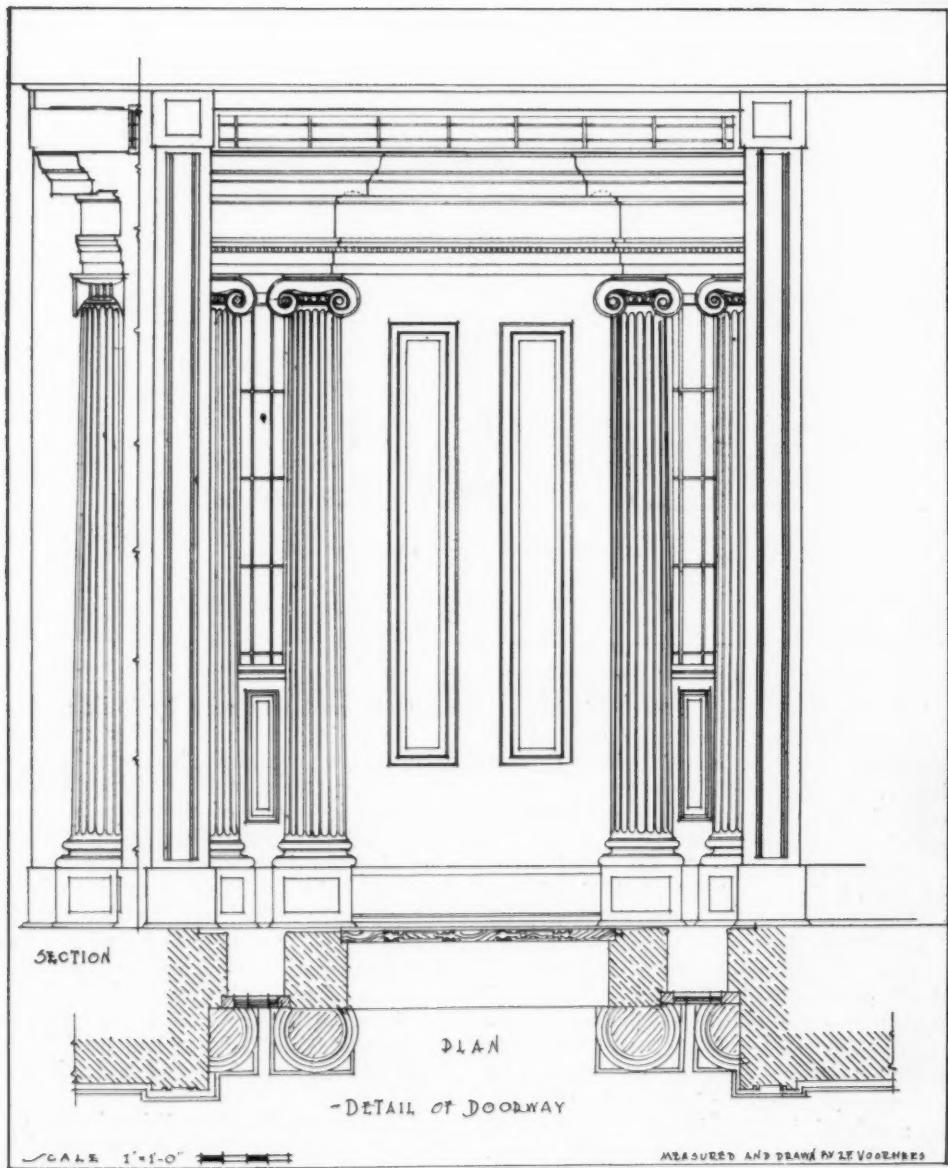
FLOOR PLANS—THE THOMPSON SINCLAIR HOUSE, ANN ARBOR, MICH.

and others still stand, as in Ypsilanti, Concord, and Otsego—even on obscure outlying farms. Strange as it seems, the interiors of many such houses, so far from being inconvenient, were made to offer novel facilities by ingenious planning, which also disguised almost completely the unusual shape of the exterior. In crude examples of the fashion there was a single central chimney with rooms about it, arranged very like so many pieces of pie. Some of the best octagonal houses have suffered destruction or remodelling, but enough remain to show the variety which was given them also: by an exterior peristyle in the lower or in the upper story, by recessed and projecting porticos. The finest example still standing would seem to be the Hamilton house in St. Joseph, with its tall pillars all about.

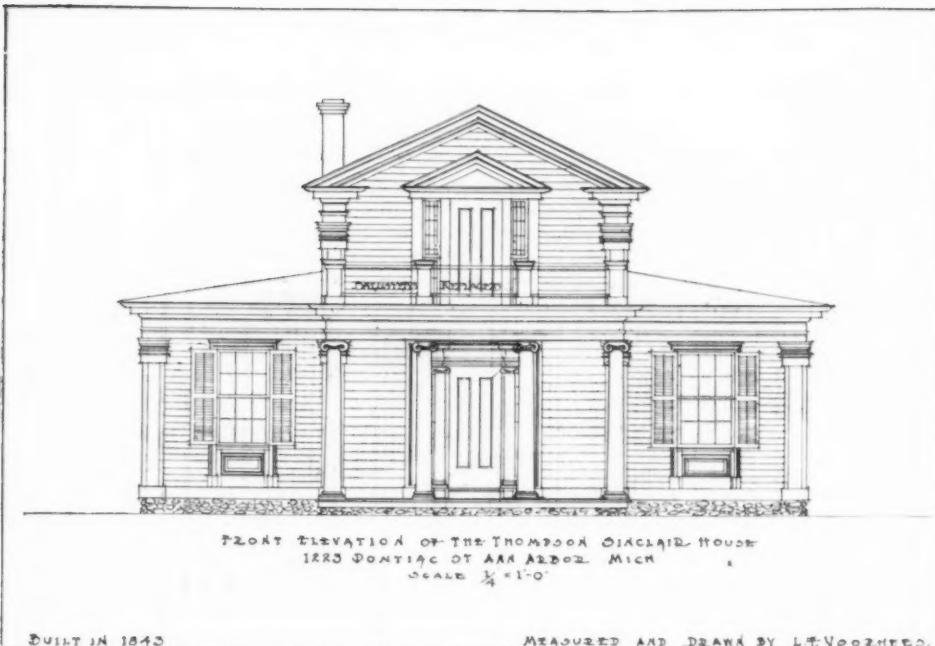
Sometimes less pretentious schemes than the temple and the octagon were fol-

lowed. Instead of the imposing gable to the street, the eaves were occasionally turned that way, as in colonial days. Thus one got a form like a glorified wing of the ordinary temple-mansion, for example the very homelike and intimate house at Otsego. Again, the roof slopes gently from all four directions. This was specially common in the region about the head of Lake St. Clair. The one story house near Mt. Clemens, with its recessed portico and restful lines, might well be a lesson in repose to many a modern "bungalow". The little Webster-Breaky house at Ann Arbor—so small that it has been twice moved—gained a special flavor from the contrast between its grave regularity and the fantastic wooden grilles of its frieze windows.

The detail of the doors and windows lacks the delicacy of the Colonial or Adam proportions and carving, and no doubt a consideration of its harmony with the



DETAIL OF DOORWAY—THE THOMPSON
SINCLAIR HOUSE, ANN ARBOR, MICH., 1843.



FRONT ELEVATIONS—THE THOMPSON SINCLAIR HOUSE, ANN ARBOR, MICH., 1843.

whole is necessary for appreciation of such amplitude and severity as that of the great doorway, *in antis*, of the Dexter house. In the McCollum house, on the other hand, the windows have moulded panels below, the doorway has a rich treatment of Ionic colonnettes of great purity of form, with leaded side-lights and transom recalling the doorways of lower New York.

In the interior, monumental scale and detail are retained. The great rooms of the Dexter house gain much impressiveness from their height, their heavily moulded plaster cornices, and their vast doorways. In minor houses the mantels, on a pair of little Doric columns or antae, were almost the only ornamental features. Pride was taken in painting woodwork in a manner we condemn unseen—graining! Those who suppose it an abomination should remember that it was much admired in Colonial days, and then should see the rooms of the Smith house at Grass Lake.

The classic types and details in Michigan persisted to an astonishingly late period. The St. Clair Bean house

near Concord was actually built as late as 1857. There was no other architect than the owner and the builders, Houghton Butler and Son. In elaboration of porticoes it is one of the most interesting of all the temple-dwellings, whether viewed from front or rear. Its date is betrayed only by the wave motive of the parapet and the lank scrolls of the gable—inocent early products of the bandsaw. It was not until the eve of the Civil War that classicism finally succumbed to the Gothic revival. Even then the types of massing which classicism had established lingered on long after Greek detail was abandoned.

Adherence to local tradition in the design of modern buildings is a principle brilliantly exemplified in such revivals as the Harvard brick and the ledge-stone architecture of Pennsylvania. So little has it been sometimes understood, however, that carloads of the Pennsylvania stone have been transported to Michigan to erect a house alien to the region. The old colonies and the newer states have each their own artistic heritage. Artists and public may enter on it if they will.

The ARCHITECT AS A FACTOR IN THE CONSTRUCTION BUSINESS ~

BY

THOMAS S. HOLDEN, Statistician
The F. W. Dodge Company

THE Statistical Department of the F. W. Dodge Company has compiled some interesting figures that define or measure the importance of the architectural profession as a business factor in construction. The results of the compilation are shown in the accompanying chart and tables, which require but little explanation. The territory covered by the figures includes about three-fourths of the total construction activity of the country.

During the first six months of this year construction was started in the twenty-seven Northeastern States on 52,447 projects, amounting to \$1,690,984,200. Of these projects 21,169, amounting to \$1,075,466,000, were planned by architects. Thus, architects planned 40.4 per cent. of the total number of projects, which amounted to 63.6 per cent. of the total cost. These percentages are slightly higher than those of other recent years.

The classification "Public Works and Utilities" is largely made up of engineering projects, such as streets, roads, bridges and sewers. Aside from this classification, 43.9 per cent. of the projects were planned by architects, amounting to 74.9 per cent. of the cost.

The tables show, in addition, the relation of the architects to the contracting business. Of the 21,169 projects planned by architects, 14,685, or about two-thirds, were built by general contractors. Of the \$1,075,466,000 worth of construction planned by architects, \$809,736,800, or four-fifths, was built by general contractors.

A comparison of the average cost per project for each of the groups shown in TABLE I is of interest. The average cost of all projects reported is \$32,223; of projects planned by architects and

two hundred forty-one

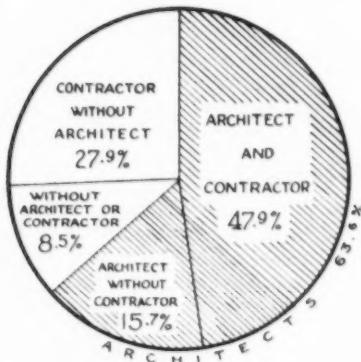
built by contractors, \$55,140; of projects planned by architects and built without a general contractor, \$49,823; of all projects planned by architects, \$50,804. The average cost of projects planned without architects and built by general contractors is \$23,049; of projects built without architects or general contractors, \$13,285; of all projects planned without architects, \$19,679. The average value of the architect-planned project is two-and-a-half times the value of the average project built without an architect.

In the six districts into which the Dodge Company's territory is divided, there are variations in the per capita volume of construction and in the percentage of work planned by architects, which are worth noting.

In the New England States, the per capita construction for the first half of 1922 was \$23.67; 61.3 per cent. of the total work was planned by architects. In New York State and Northern New Jersey, where the per capita construction was \$37.37, work planned by architects was 78.6 per cent. of the total. In the Middle Atlantic States (Eastern Pennsylvania, Southern New Jersey, Delaware, Maryland, District of Columbia, Virginia and the Carolinas) the per capita construction was \$17.51 and the percentage planned by architects was 53.5. In the Pittsburgh District (Western Pennsylvania, West Virginia, Ohio, Kentucky and Tennessee) the per capita construction was \$16.92, the percentage planned by architects, 56.0. In the Central West (Illinois, Indiana, Iowa, Wisconsin, Southern Michigan, Missouri and Eastern Kansas) the per capita construction, \$21.14, the percentage planned by architects 60.3. In the Northwest (Minnesota, the Dakotas and Northern Michigan) the per capita construction, \$11.86,

Percentage of Construction Planned by Architects First Six Months 1922

(27 NORTHEASTERN STATES)



TOTAL CONSTRUCTION

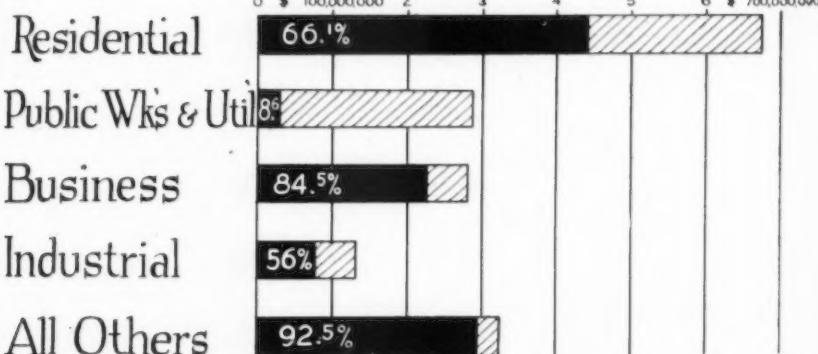
\$ 1,690,984,200

PLANNED by ARCHITECTS

\$ 1,075,466,000

Analysis of Construction by Classes

Black Areas Show Percentage
Planned by Architects



FIGURES TABULATED FROM DODGE CONSTRUCTION REPORTS
©1922 THE ARCHITECTURAL RECORD

ANALYSIS OF CONSTRUCTION PROJECTS—27 NORTHEASTERN STATES—FIRST SIX MONTHS, 1922—TABLE I
Planned by Architects

Class	General Contractor			Without Contractor			General Contractor			Without Contractor			Totals			
	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost	No. Proj.	Cost
Business Buildings.....	2,966	\$206,845,000	862	\$30,083,000	154	10,000,000	690	\$46,086,900	31	748,100	4,480	261,862,400	73	8,091,700	1,810	123,180,800
Industrial Buildings.....	722	59,002,200	154	10,000,000	5,201	206,979,600	12,741	108,624,500	236	17,918,500	606	22,027,200	77	121,364,600	2,082,600	288,932,500
Public Wks. and Utilities.....	256	24,239,400	5,201	206,979,600	240,449,000	279,201,200	6,453	\$264,981,100	16,001	\$210,214,400	20,481	\$472,076,800	10,797	\$141,358,800	10,724	\$1,402,051,700
Totals omitting Public Works and Utilities	14,429	\$785,479,400	6,484	\$265,729,200	14,685	\$809,736,800	14,685	\$809,736,800	20,481	\$472,076,800	10,797	\$143,441,400	10,724	\$1,402,051,700	10,724	\$1,402,051,700
Totals	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52,447	.....	.....

NOTES.—The group "MISCELLANEOUS" includes Educational Buildings, Hospitals and Institutions, Military and Naval Buildings, Public Buildings, Religious and Memorial Buildings, and Social and Recreational Buildings. The number of buildings is not, in the case of residential buildings, the same as the number of projects. Of the residential projects given above, 4,168 were for 2 or more houses built as a single operation, a total of 26,793 houses. Consequently, the 35,448 residential projects covered 58,073 buildings.

TABLE II
PERCENTAGES OF TOTAL IN EACH CLASS AND IN ALL CLASSES, BY NUMBER OF PROJECTS, AND BY COST
Planned by Architects

General Contractor	Without Contractor			Total	General Contractor			Without Contractor			Total					
	Proj.	Cost	Proj.		Proj.	Cost	Proj.	Cost	Proj.	Cost	Proj.	Cost	Proj.	Cost		
Business Buildings.....	45.3%	73.8%	13.2%	10.7%	58.5%	84.5%	30.0%	11.9%	11.5%	3.6%	41.5%	15.5%	40.2	41.5%	15.5%	
Industrial Buildings.....	47.9	8.5	8.1	48.7	56.0	38.1	37.4	13.2	6.6	51.3	44.0	51.3	5.3	51.3	44.0	
Public Wks. and Utilities.....	8.4	0.6	0.2	5.9	8.6	92.6	90.6	1.5	0.8	94.1	91.4	94.1	1.5	94.1	91.4	
Residential Buildings.....	22.2	14.6	30.6	36.8	66.1	35.9	16.0	27.3	17.9	63.2	33.9	63.2	2.0	63.2	33.9	
Miscellaneous.....	35.5	6.2	5.6	82.0	92.5	16.0	6.9	2.0	0.6	18.0	7.5	18.0	7.5	18.0	7.5	
All Classes except Public Works and Utilities.....	30.3%	56.0%	13.6%	18.9%	43.9%	74.9%	33.6%	15.0%	22.5%	10.1%	56.1%	25.1%	20.6%	8.5%	59.6%	25.1%
All Classes.....	28.0%	47.9%	12.4%	15.7%	40.4%	63.6%	39.0%	27.9%	20.6%	8.5%	59.6%	36.4%	20.6%	8.5%	59.6%	36.4%

and the percentage planned by architects, 50.1. In the entire territory, where the percentage planned by architects was 63.6, the per capita construction was \$22.08.

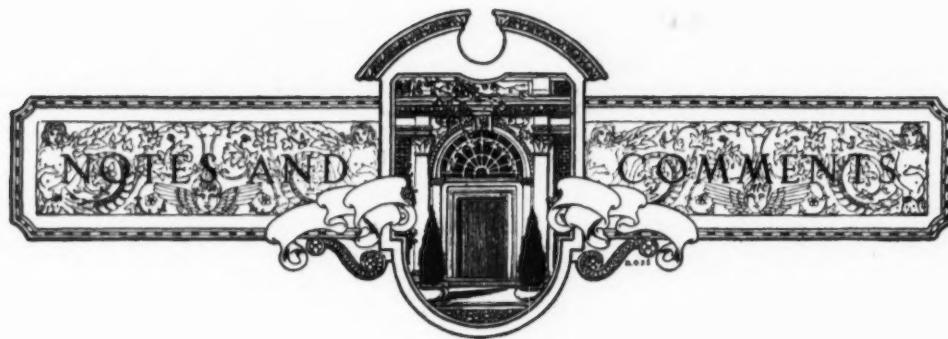
The Dodge Company has also just made an enumeration of the architects in its various districts. It shows for New England States 642 architectural firms, or 1 for each 11,526 of population; in New York State and Northern New Jersey, 1,925 architects, or 1 per 6,679 of population; in the Middle Atlantic States, 832 architects, or 1 for each 17,557 of

population; in the Pittsburgh District, 932, or 1 architect per 16,553 of population; in the Central West, 2,112, or 1 per 10,547; in the Northwest, 210 architects, or 1 per 19,044. The total number of architects in the entire territory under consideration is 6,653, or 1 architectural firm per 11,509 of population.

If detailed study is made of the figures given in the attached tables, it is well to bear in mind that from 50 to 60 per cent. of the total construction cost represents the material cost, the remainder being the labor cost of construction.



PORCH OF PARISH CHURCH OF BENFLEET,
ESSEX, ENGLAND.



**A Résumé of
Viollet le Duc's
Observations and
Deductions on
Mediaeval
Architectural
Polychromy**

As data are gathered concerning the manner in which the color problem in architecture was handled in by-gone days, astonishment increases with acquaintance, at the extent to which the tested method ruled practice: this applies to the Gothic expression as much as it does to the Greek. Our predecessors valued safety in procedure as highly as some of our contemporaries prize the most volatile impulses, as the most desirable means of producing artistic results. The unanimity with which the standard solution was adopted is accounted for, in the first place, by the spirit of the age, which regarded art expression of greater importance than the revelation of the individual's temperament. There was a peculiar vitality given to shop-practice in the middle ages; it possessed a human impulse which that deadly term does not convey in its current significance. When we bear in mind the intimate contact of master and apprentice and the prestige which the social order must have imparted to the former in the consideration of the latter, there is no occasion to feel surprised that the younger generations should have accepted artistic principles in practice, the value of which they saw demonstrated daily in the work of the master. Any addition made to technical or artistic experience was regarded as a valuable possession, to be transmitted to their successors in the craft for perpetuation; a vivid contrast to the modern attitude, which is generally most concerned with patent law protection.

It is much to be regretted that Viollet le Duc has not left a more complete record of the extensive investigations which he made of those color remains still discernible upon many famous Gothic structures in his day, which have been since obliterated through the pollution of city atmospheres.

two hundred forty-five

Though his notes upon Gothic polychromy are very sparse, they give a very accurate impression of the extent to which custom controlled the color treatment of ornamentation and the arrangement of colors in groups, during the XII, XIII and XIV centuries. The general principles which determined the architectural location of colored decoration parallels those adopted by the Greeks, in that ornamental items were regarded as appropriate for color effect, and the main structural features as unsuitable. The principal difference in general plan of location was accounted for by those contrasts in structural design which exist between Greek and Gothic buildings; the Greeks concentrated color upon the upper part of the building, which the Gothic designers left comparatively free of color, though the roof was elaborately decorated: these differences however, do not imply opposite views on the part of Greeks and the mediaeval workers; on the contrary, they demonstrate the wide range of adaptability of the basic principle of color location in its relation to the structural properties of architectural items.

Viollet le Duc found numerous remains of coloring of the façades of the cathedrals of Nôtre Dame, Rheims, Amiens and others, in sufficient completeness to enable him to formulate a definite idea of their original condition: he was further able to observe that the quality of color effect varied by district, and that a decided change occurred during the XIII century, when the layman superseded the clergy as designer.

The Gothic palette was divided into two classes of color: the simple and the composite. The simple colors were the primaries according to the obsolete classification; yellow, red, and blue. The composite included certain tones obtained by the mixture of the three simple colors, such as green, purple, orange, grey, etc. Certain color combinations prevailed in ornamental treatment; these form three typical

THE ARCHITECTURAL RECORD.

groups. The first typical coloring consisted of yellow and red, with a small proportion of black and white. The second, of red, yellow and blue, with their compound tones, green, purple and orange. The third was composed as the second with the difference that gold takes the place of white as the highest toned color.

A systematic procedure apparently dictated the grouping of color upon ornamentation. The details of an ornamental composition were, according to Viollet le Duc, considered on the basis of their relative decorative importance and their respective areas: the colors, in the order of their radiant properties. A systematic relationship was established between ornamental values, areas, and color quality. He reconstructs a system whereby the values of the simple colors were designated by ciphers as follows: yellow, 1; red, 2; blue, 3. When red was mixed with yellow to produce an orange, the number designating that tone was 3, the product of yellow 1, plus red 2. Similarly when red was mixed with blue to produce a purple, its number was 5, the product of red 2, plus blue 3. The arrangement of colors upon ornamentation was determined on the following plan: in many of the XIII century ornamentations, colored principally in red and yellow, the areas of motif to field is approximately 1 to 2: the color of the lesser degree of radiance, yellow, is chosen for the larger area, and the red for the smaller, reversing their numerical order in relation to the size of the spaces to be covered. By thorough investigation of a series of examples, Viollet le Duc found this system of apportionment to have been consistently followed for over two centuries. To summarize, if one detail were five times the area of another, yellow (1) might be used on the larger, and purple (5) on the smaller. In his analysis of the data which he evidently accumulated in considerable quantity, and with great earnestness, Viollet le Duc made another observation which is of considerable interest, as evidence of the strong inclination of the mediaeval decorator of buildings for systematic procedure in polychromy. In addition to the order in which ornamental values, areas, and color qualities were considered, he discovered that colors were arranged upon the items of the decorative motif in a certain sequence: and that, following the order of ornamental importance of those items, the colors were taken alternately from the simple and the composite groups. Pursuing this observation, he found that the detail of major importance was invariably a simple color: in no instance did he find a composite heading the list: and, in no color scheme was the list ter-

minated with a simple color for the least significant detail. The color sequence most frequently noted was arranged as follows:

1. Blue (simple).
2. Green (or purple). (Composite.)
3. Vermilion (simple).
4. Purple (or green). (Composite.)
5. Yellow: followed by rose, light blue, turquoise-green, straw-color, and shades of light grey or tones of white.

The Gothic polychromists in their creation of effect reveal an intimate knowledge of those phenomena peculiar to brilliant color, or contrasting tone values, which produce certain optical illusions in their decorative application. They utilized these with excellent judgment and foresight, deliberately taking advantage of, and compensating for, those illusions which affect the apparent dimension of a detail when colored with tints of varying intensities, or when placed upon backgrounds of contrasting tone values. They took evident pleasure in playing tricks with the apparent size of solids, which they widened or narrowed at will by the character of the ornamentation with which they covered them. They discovered that the sense of distance was subject in a great measure to the manipulation of color quality, tone values, and ornamental scale. Effects created were not the result of hazard, but of deliberate calculation, based upon an accurate observation of all factors involved, estimated with a precision which might almost be termed scientific were it not so essentially artistic.

As the capacity for artistic expression became more fluent with the fuller development of the Gothic manner, and the taste for sumptuous effect more fastidious, the increased use of gold is very noticeable. They appreciated to the fullest extent its great value as a harmonizing element in ornamentation combined with brilliant and contrasting colors. The manner in which they utilized their observation of the peculiar decorative properties of gold in ornamentation, is a remarkable demonstration of their deep knowledge of inherent artistic possibilities existing in materials used for the creation of effect. In the color treatment of the vaulting, gold played a very important and useful part. Blue was adopted as the conventional color for the vaulting or ceilings, either because of its relation to the color of the sky, or because it gave an impression of height which could not be equalled with any other color. The then available pigment was crude in its brilliancy, to such an extent that it must have been difficult to establish a harmonious color relation between so large a mass of aggressively bright pigment, and colors of lesser radiance massed in much smaller proportions through

the other parts of the building. To neutralize this, and to establish the requisite tonal relationship, delicate red and green patterns were scattered over the blue field outlined with gold; the gold incorporated the red and green with the blue, thereby modifying the aggressiveness of that color; this objection was further developed by the sprinkling of gold diapers over the blue ground. In course of time, as the Gothic color sense became more acute, they modified the crude blue by introducing a light yellow in the pigment, giving it a greenish cast, thus introducing a common color factor of yellow between the ochre red, green and blue. This method of establishing harmonious color relations by means of the common color factor was much resorted to by the Gothic colorists throughout the greater part of the three centuries. Other color conventions prevailed, in connection with the combination of certain colors: when yellow was used with green, the yellow was of an orange cast; if a pure yellow was desired for a specific effect, the yellow was high in tone and the green low. All purple found on ancient buildings inclined to the madder, never to the violet.

They developed a certain technique in outlining ornamentation, the description of which must be deferred to a future number; these methods assumed an importance in the development of effects, equal to that which outline technique assumed in the Greek architectural polychromy.

LEON V. SOLON.

**Some of
W. R. Lethaby's
Essays
Reprinted**

There is a distinct flavor of Chesterton in Professor Lethaby's writings. He often seems on the point of achieving the famous inverted paradox, and on almost every page some keen, incisive, flashing phrase lights up his theme from an unexpected angle. This little group of collected essays and addresses* is a mine of clear, stimulating thought on things architectural, the art of living, housing problems, the arts and handicrafts and other pertinent matters. There is an astonishing array of workable ideas which in action would contribute much to definite form in living. As if to emphasize the importance of arrangement and order in our lives, and the fundamental relation of all art to living, Professor Lethaby puts first the essay entitled "Architecture as Form

*"Form in Civilization," by W. R. Lethaby. Oxford University Press, London, 1922.

in Civilization"—striking the keynote of those that follow: "Towns and Civilization," he says, "are two words for nearly one thing: the City is the manifestation of the spirit of its population and the larger body it builds for its soul." Our cities and our buildings are mirrors which reflect our conscious ideas of beauty and of art. Since architecture may be called the totality of all the arts, it most truthfully reflects. It therefore is not merely a visible accumulation of structural ideas, a matter of appearances, but a matter of metaphysics.

Professor Lethaby is entirely right in dwelling so persistently on the thought that art, and more specifically the art of architecture, is one of the most sustaining aspects of human existence. The right kind of architecture in a community—buildings which are suited to their function in the community—are an inspiration to the people. Without inspiration people cease to live and without love they cease to live.

We do not have to be urged to admit that our cities with their unbelievable conditions of unkemptness and lack of order, should be and could be changed into places of order and cleanliness where a reasonable measure of happiness would be within the reach of everyone. (After all, what is living but the science of being happy?) What is needed to change this picture of ugliness is action—the action that follows a change of concept of ideas, whose manifestation can only be cities of beauty and order where the affairs of men move with rhythm; where work is justly productive; where it is art. Such is the "city that lieth four-square"—where the impossible is brought to fulfilment.

Elsewhere we read: "A town, then, is a work of art according to its quality as a dwelling-place for men. Its art is its service and stimulus to life." This was true of the beginning of art in primitive life, particularly with regard to Music, which was not only a social diversion but was used deliberately as a stimulus to nervous energy; such as, for example, on festal celebrations and before battles. Every act of life was a ceremony, with music or some art an inseparable part of it. Confucius said: "If you would know a people rightly, examine into the nature of its music."

Art, if it is to become a vibrant, national attribute, moving us to sincere and noble expression, cannot remain "fine" in the sense that it is unattainable by large numbers. "Art," says Professor Lethaby, "is not only a question of high genius; that

THE ARCHITECTURAL RECORD.

is only the crest of a great wave rising from gifted peoples, and without the flood of common art you cannot have the crest of genius. This common art, which is the thing of importance (as the other will form itself out of it) is concerned with all the routine things of life—laying the breakfast table and cleaning the door-steps of our houses, tidying up our railway stations, and lighting the High Streets of our towns." Art has been too much relegated to journalism; it has fallen into the mesh of specialization, where it has acquired so nebulous a collection of terms that ordinary people give it gratefully "into the hands of the specialists who say they know all about it." Renamed and redeemed from this bondage it would become a competent element in the lives of the common people. Here we would find the essence of art and from this source would flow an art which would be the outward and visible form of the spirit of unity. With this, as Professor Lethaby suggests, who need worry about genius?

MOYCAH BRANDOW.

July 13, 1922.

The Architectural Record Company,
Gentlemen:

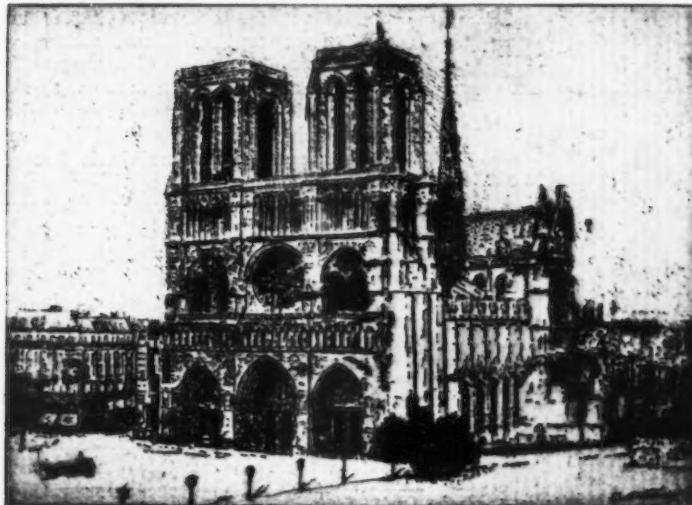
I am pleased to note the four pictures of the Lincoln school building which appear on pages sixty-five to sixty-eight of your July issue.

May I call your attention to an error in the name of the building which is misleading to the public? This is not a high school building alone, but is a combination of elementary, high school and educational research institution. I cannot imagine how the error occurred or how this name was furnished you as it is; of course, the architects and builders are aware that that is not the proper name.

It is true that the public is spending more money for building high schools than is spent proportionately in building elementary school buildings, and because of that fact the pictures might have more of an immediate appeal to people who are interested in high schools, but that is immediate only, and since it is an error I think that it might be well to call attention to that fact if it meets your approval.

Sincerely yours,

OTIS W. CALDWELL.



NÔTRE DAME, PARIS
Etching by DeWitt K. Fessenden.